

LITTELL'S LIVING AGE.

Fifth Series, }
Volume IX. }

No. 1597. — January 16, 1875.

{ From Beginning
Vol. CXXIV.

CONTENTS.

| | | |
|--|------------------------------|-----------|
| I. MODERN SCIENTIFIC MATERIALISM, . . . | <i>Blackwood's Magazine,</i> | . . . 131 |
| II. THREE FEATHERS. By William Black, author of "The Strange Adventures of a Phaeton," "The Princess of Thule," etc. Part VIII., | <i>Cornhill Magazine,</i> | . . . 146 |
| III. CONTRASTS OF ANCIENT AND MODERN HISTORY. Part III. By Francis W. Newman, | <i>Fraser's Magazine,</i> | . . . 151 |
| IV. THE STORY OF VALENTINE; AND HIS BROTHER. Part XIX., | <i>Blackwood's Magazine,</i> | . . . 161 |
| V. EARLY EASTERN TRAVELLERS. — MANDEVILLE, | <i>All The Year Round,</i> | . . . 169 |
| VI. ON THE VATNA JOKULL, | <i>Fraser's Magazine,</i> | . . . 175 |
| VII. THE LIFE OF THE PRINCE CONSORT, | <i>Spectator,</i> | . . . 184 |
| VIII. ADVICE TO YOUNG HOUSEWIVES, | <i>Saturday Review,</i> | . . . 189 |
| POETRY. | | |
| AGATHON, | 130 1874, | . . . 130 |
| MISCELLANY, | | . . . 192 |

PUBLISHED EVERY SATURDAY BY
LITTELL & GAY, BOSTON.

TERMS OF SUBSCRIPTION.

For EIGHT DOLLARS, remitted directly to the Publishers, the LIVING AGE will be punctually forwarded for a year, free of postage.

An extra copy of THE LIVING AGE is sent gratis to any one getting up a club of Five New Subscribers.

Remittances should be made by bank draft or check, or by post-office money-order, if possible. If neither of these can be procured, the money should be sent in a registered letter. All postmasters are obliged to register letters when requested to do so. Drafts, checks and money-orders should be made payable to the order of LITTELL & GAY.

AGATHON.

AWAY with me to Athens, Agathon !
 Again we pause in idle mood to see
 Great Pheidias' pupils shape the marble
 fair,
 Where perfect forms by Art from chaos
 won,
 And garments broad and free
 Stand cool and clearly limned in violet air,—
 Statues and workmen in such beauty clad,
 We cannot pause to judge but are divinely
 glad.

Bright Agathon, once more I challenge
 thee ;
 The shade has reached the wrestlers, 'tis
 the time
 For merry play and contest. Hark ! with
 sound
 Of laughter rippling, pausing daintily,
 What shouts of welcome chime !
 Young Charmides methinks doth take the
 ground,
 Or naked Lysis fresh from eager game
 Draws down the strigil light o'er breast and
 limbs aflame.

There will we lie and listen, too, for know
 I spied but now amid the olive-trees
 That strange old face you loved a while ago ;
 Ay, it was Socrates !
 Or else a satyr by some god's gift wise
 Leered through the dusky leaves to mock our
 dazzled eyes.

O that gay supper when he lay by me,
 And talked and talked, till I was wild with
 joy
 Of thinking bright new thoughts, nor cared
 to see
 The dancing-girl from Corinth nor the boy
 Who bore the wine-jar to us,—and 'twas
 good
 To see thee lie and laugh at my unwonted
 mood.

O Agathon, and how we burned that day,
 With Æschylus' great chorus in our ears,
 To see our queenly vessels far below
 Ride down and dash to foam the quiet bay,
 And thine eyes turned to mine were filled
 with tears,
 And thy fair face aglow,
 For the old bard who fought at Marathon,
 And that our sires were brave when Salamis
 was won !

My friend, canst thou call back our friend-
 ship's dawn,
 What time I checked my horse on yon
 steep road,
 Where the slow pageant moved in order
 mete,
 And boys from lowland lawn
 Passed upward to the shrine with fragrant
 load,
 When 'mid all voices thy voice sang so
 sweet

That as I heard my joy was almost pain,
 And many deemed I was Harmodius come
 again ?

Vain, vain—the hope is vain !
 Our skies are dull, and through the ragged
 firs
 A slow cold wind is blowing. Far away
 From driving clouds and rain
 A joyous breeze the rich Ægean stirs,
 And o'er the dimpling waves light sea-birds
 play ;
 But no queen Athens in her beauty bare
 Bathes warm with golden hue in the deep
 violet air.

The city of the pleasant gods is cold ;
 No more the mellow sunlight streams
 On naked rocks that spring to marble rare ;
 Temples and legends old
 Are empty as a poet's vanished dreams ;
 And though we hear the dawn was wondrous
 fair,
 Yet by no flash of art nor labour slow
 Can we bring back the light that faded long
 ago.

Bright Agathon, we cannot strive with
 time ;
 The shadows steal around us, and from far
 Grows in our ears the moan of ocean gray :
 Weak hand nor feeble rhyme
 Can charm again that spirit like a star
 That rose awhile o'er Hellas. Stay, O stay,
 Sweet friend ! I cannot bear the days to be.
 Ah ! Hermes, give him back ! Must he too
 fade from me ?

Blackwood's Magazine.

J. S.

[From The Transcript.]

1874.

OLD year, that through the windy, starlit night
 Passeth to the dim land of Yesterday,
 How many hopes thou bear'st with thee away,
 Into that silent country hid from sight,—
 How many sweet, lost visions of delight !
 Yet 'tis no sad farewell to thee we say,
 As solemnly thou passeth ;—we but pray
 That we thy lessons may have read aright,
 That in the pain thy sharp denials brought
 The Father's tender "nay" we may have
 heard.
 Thou didst but bring his message, his good
 word,
 Which, if we heed it, is with healing fraught.
 He knoweth best. With hushed and trustful
 thought

We turn to greet the New Year of our Lord.
 Boston, December, 1874. E. G. B.

From Blackwood's Magazine.

MODERN SCIENTIFIC MATERIALISM.

NOTHING is more strange than the incessant reproduction of old thoughts under the guise of new and advanced opinions. It would seem as if the human mind, with all its restless activity, were destined to revolve in an endless circle. Its progress is marked by many changes and discoveries; it sees and understands far more clearly the facts that lie along the line of its route, and the modes or laws under which these facts occur; but this route in its higher levels always returns upon itself. Nature and all its secrets become better known, and the powers of nature are brought more under human control; but the sources of nature and life and thought—all the ultimate problems of being—never become more clearly intelligible. Not only so, but the last efforts of human reasoning on these subjects are even as the first. Differing in form, and even sometimes not greatly in form, they are in substance the same. Bold as the course of scientific adventure has seemed for a time, it ends very much as it began; and men of the nineteenth century look over the same abysses of speculation as did their forefathers thousands of years before. No philosophy of theism can be said to have advanced beyond the Book of Job; and Professor Tyndall, addressing the world from the throne of modern science—which the chair of the British Association ought to be—repeats the thoughts of Democritus and Epicurus, as the last guesses of the modern scientific mind.

Professor Tyndall is well known as a clever and eloquent lecturer on scientific subjects. He has occupied himself with the popular exposition of science; and whatever doubts may be expressed of the solidity of his acquirements and the soundness and sobriety of his knowledge, none can well question that he has succeeded brilliantly in his chosen line. Both in this country and in America vast audiences have listened with enthusiasm to his expositions; and the wide-spreading interest in scientific education is largely indebted to his activity and zeal.

It is not our present purpose to enter

upon any estimate of Dr. Tyndall's position as a man of science. The real or permanent value of his scientific labours are beyond our scope. But when he comes forth from his lecture-room to address the world on those old and great subjects which lie at the foundation of all human knowledge and belief, his utterances necessarily provoke criticism. Not content with the function of expositor, he has again, as occasionally before, affected the rôle of prophet, and invited men to look beyond the facts and laws of science to the origin of things in its highest sense.

It may be questioned whether nature has fitted him for this higher rôle. A man may have a keen and bright intelligence eminently fitted for scientific observation and discovery, and a fertile and lucid power of exposition, and yet no gifts of speculation or prophetic depth. The very keenness of vision which traverses rapidly the superficialities of things, often becomes blunted when trying to penetrate below the surface. The audacity which ministers to success in experiment often overleaps itself in the task of thought. Certainly neither Dr. Tyndall nor any of his school are likely to suffer from any modesty of effort. If they do not scale the barriers which have hitherto confined human knowledge, it will not be because they have shrunk from assailing them. One remembers an old story of Newton, in the plenitude of his powers and of his marvellous discoveries, confessing to his immeasurable ignorance; comparing himself to a child who had only gathered a few pebbles on the shore of a boundless sea. This is possibly a myth, like others of those ages of reverence which have long since gone. Our modern scientists (as it is the fashion to call them) are certainly not animated by any such spirit of modest humility. They rejoice in the great achievements of the scientific mind, and laud and magnify their own share in them. All "religious theories" must be brought to their lecture-rooms and tested. We do not quarrel with the pre-eminence thus claimed for science. But the spirit in which the claim is made is hardly a phi-

losophical, and still less a religious spirit. Religion is, after all, a great fact in human life and history—as great as any with which science can deal. It is the highest of human experiences, and should never be approached without something of the reverence, and sense of mystery, and tenderness, and depth of insight which belong to its essential nature. It is a great thing, no doubt, to extend the boundaries of science, and to apply its verifying tests to the explanation of all phenomena; but it is also a serious thing to meddle rashly with the foundations of human belief and society, especially when one has nothing better to suggest than the old guesses of a philosophy which has more than once failed to satisfy even the intellectual aspirations of mankind.

Particularly it must be questioned whether the position temporarily occupied by Professor Tyndall was an appropriate one for the ventilation of materialistic theories. The British Association has outlived the early ridicule with which its annual meetings were greeted, and has gathered to itself the mass of scientific workers in the three countries. It is a representative institution, and its annual president ought to bear a representative character. His private religious opinions, or lack of religious opinions, are something with which the Association has nothing to do; and there is a degree of impertinence in the obtrusion on such an occasion of the "confession," whether of a new or an old faith. Men do not expect to have their religious convictions either helped or hindered at the British Association, and it is not becoming that they should have to complain of the president's address as disturbing their customary tone of religious thought. If they wished to go into fundamental questions of cosmical origin, and the right which the idea of a divine mind rather than mere force has to stand at the head of all things, they would prefer, or at least all sensible men would prefer, leisure of inquiry and of interrogation for such questions. The chair of the British Association, no less than the Christian pulpit, offers no opportunity of reply. It is a place of privilege, and

every such place has its decent reserves as well as its duties. Professor Huxley, who has shown his prophetic aspirations no less than Professor Tyndall, and a considerably deeper capacity of treating both philosophical and religious questions, wisely abstained as its president from turning the British Association into a propaganda of scientific belief or no-belief. He spoke with authority on the progress of a most interesting branch of science, to the culture of which he had devoted himself. It would have been well, we think, if Professor Tyndall had followed his example, for the sake both of his own reputation and of the reputation of the British Association.

For, after all, the British Association, while it has survived ridicule, and no doubt worked its way into some real function of usefulness in the promotion of science, is not without its ridiculous side. Like every other popular institution, it has gathered to itself not only wise and able workers in science, but many of those spurious theorists, and vague intellectual fanatics, who are constantly seeking an opportunity of presenting themselves before the public. It has its crowds of hangers-on who know little of science, and not much of anything else, but who find its sections an appropriate sphere for their windy declamation on all subjects which can possibly be brought within their scope. These are the devotees of what is known as the modern spirit, waiting with greedy ears upon the utterances of its apostles and prophets, and ready to catch at any sound of scepticism as a breath of life. It is a strange phenomenon, this enthusiasm of unbelief, which is in the air of our time, and the rush which so many minds are making towards negations of some kind or another. There is nothing apparently so difficult for men as to stand alone, and calmly inquire into the truth of great questions. But few men, in point of fact, are fitted by native strength of mind or training to face such questions themselves. They are either scared by them, and so revert to some blind form of faith, or vaguely fascinated by them, and ready to take up with the first daring solution

that comes in their way. The latter class of enthusiasts are apt to fancy themselves independent thinkers, because they go with the new spirit of the times, and throw off so readily the garments of their former profession. But, in point of fact, they are often more bigoted and slavish in thought than the blindest partisans of an ancient faith. Men and women who profess their inability to believe anything their fathers did, "look up," and feign to be fed with the emptiest generalizations of a pseudoscience. They are disciples of authority as utterly as those who are willing to abjure all science at the bidding of a supposed supernatural voice.

It is a bad thing in itself, and it is bad for the British Association, to minister to the crude appetites of these neophytes of the modern spirit, who have laid aside religion without any capacity of rational thought on their own behalf. Dr. Tyndall, in his better moments, can hardly be gratified by the enthusiasm of such disciples; and yet it may be said that they are the only class to whom such an address as his would be perfectly welcome. His more thoughtful hearers might be charmed by its eloquence, and the brilliant clearness and rapid ease of its diction here and there; but they must, at the same time, have been pained by its one-sidedness and superficiality, and the inconclusive vanity of its results. To them it could be no revelation to have all things traced to a material origin, on the supposition of matter being endowed with all possible potencies of life. On such a supposition hardly anything remains to be explained, only that it is as easy to make an hypothesis on one side as the other, and the hypothesis of the materialist is at least as unverifiable as that of the theist. Dr. Tyndall himself, no doubt, knows this, and the difficulties which beset his own theory no less than all theories on the subject. But he ought to have remembered that there were many of his hearers who could receive the theory on trust from him, as a sort of temporary pope of science; and that the last thing any really scientific man should wish to encourage is that species of pre-

sumptuous ignorance which mistakes hypothesis for fact, and "guesses after truth" for the truth itself. Few things are more intolerable than the confidence of ignorance on any subject; but the confidence of an ignorance that thinks itself in the front of knowledge, because it has learned the most recent nomenclature of scientific pretension, is something from which all wise men would shrink, and of which all modest men feel ashamed.

But it is necessary to look more carefully at Professor Tyndall's address. Our criticism will be better applied when we have submitted its main points to the reconsideration of our readers. It is only fair that we should hear him speak for himself, and with the force due to the order and connection in which he has himself set forth his thoughts. His address is partly historical and partly argumentative. It is written throughout with great clearness, and a brilliant lightness and expressiveness of touch of which the author has frequently shown himself master; and yet, as a whole, there is a lack of coherence and higher order of ideas in it. He glances from topic to topic with great adroitness, and mixes up history with argument, and argument with history, in ingenious combination; but neither is the history accurate or exhaustive, nor the argument carried out with consistency and force. It is possible, therefore, to mistake his meaning here and there, and the exact conclusions to which he points; but it is hardly possible to misunderstand the drift of his thought, and the antagonism which he everywhere implies betwixt science and religion, or, at least, religion in any fashion such as men have hitherto been accustomed to receive it. It will be our care in the sequel to show that he, as well as his whole school, greatly exaggerate this antagonism, and, in fact, only impart any reality to it by perverting theological conceptions on the one hand, and, on the other hand, claiming for science what can never come within its sphere.

Dr. Tyndall's address strikes, in its very opening sentences, the keynote of

this alleged opposition betwixt science and religion. "An impulse inherent in primeval man," he says, "turned his thoughts and questionings betimes towards the sources of natural phenomena. The same impulse, inherited and intensified, is the spur of scientific action to-day. Determined by it, by a process of abstraction from experience, we form physical theories which lie beyond the pale of experience, but which satisfy the desire of the mind to see every natural occurrence resting upon a cause. In forming their notions of the origin of things, our earliest historic (and doubtless, we might add, our prehistoric) ancestors pursued, as far as their intelligence permitted, the same course. They also fell back upon experience, but with this difference—that the particular experiences which furnished the web and woof of their theories were drawn, not from the study of nature, but from what lay much closer to them—the observation of men. Their theories, accordingly, took an anthropomorphic form. To supersensual beings, which, 'however potent and invisible, were nothing but a species of human creatures, perhaps raised from among mankind, and retaining all human passions and appetites,' were handed over the rule and governance of natural phenomena."

The words marked as a quotation in this paragraph are from the third section of Hume's "Natural History of Religion." The object which Hume has in view is not exactly that professed by Professor Tyndall; yet the language of the great sceptic of the eighteenth century naturally comes to the assistance of his followers in the nineteenth. It is singular, indeed, how all the most characteristic ideas of modern positive thought were anticipated by Hume, and not merely in vague hint, but in clearer and more outspoken words than are now frequently used. All the prevailing talk as to *anthropomorphism* is merely an echo of Hume, or of the sceptical Philo, who may be supposed to represent him in the "Dialogues concerning Natural Religion." In the essay from which the above quotation is made, he speaks "of the universal tendency among mankind to conceive all beings like themselves, and to transfer to any object those qualities with which they are familiarly acquainted."* He is everywhere full of the modern conception of mind as the mere efflux of na-

ture, just as "heat or cold, attraction or repulsion," or any other phenomena which fall "under daily observation."* Nay, he is the noted precursor of that very tone of condescension as to religion which is so common to the present school, and which appears with such disagreeable emphasis in the close of Dr. Tyndall's address—the tone which allows it a subjective validity in the region of faith or emotion, but no objective validity in the truth of things. It is very natural, therefore, to find the president of the British Association leaning upon the arm of the good-natured and keen-witted Scotch philosopher, who has done so much of the work of thought for our modern philosophers before they were born.

All the same, Professor Tyndall hardly makes a fair use of the quotation of Hume. Hume is writing of the origin of religion, and not of supposed theories of "the origin of things." The origin of religion, he maintains, is not to be sought in the contemplation of natural phenomena—for such a contemplation could hardly fail to lead men to the conception of a universal cause, or "of one single being who bestowed existence and order on this vast machine, and adjusted all its parts according to one regular plan or connected system. . . . All things," he adds, "in the universe are evidently of a piece. Everything is adjusted to everything. One design prevails throughout the whole. And this uniformity leads the mind to acknowledge one author."† It is not the observation of nature, but of human life in its thousand accidents and variations, which leads men to the conception of a "mob of gods" invested with the governance of the world. Whether Hume's theory be correct or not, is nothing to the point. It is a theory of the origin of religion in man's heart that he is in quest of, and not a theory of man's earliest thoughts about natural phenomena.

While these thoughts, according to our lecturer, necessarily took at first "an anthropomorphic form," there yet rose, "far in the depths of history, men of exceptional power" who rejected anthropomor-

* Dialogues concerning Natural Religion, part ii.

† Natural History of Religion, sect. ii. Here, as in many other places, Hume's theism may be said to be ostentatious. And it was probably sincere. While the chief author of many of the ideas which have been applied by the modern philosophy to sap the foundations of theism, he cannot be said himself to have abandoned the theistic position, or at least he never professes to have done so.

phic notions, and sought "to connect natural phenomena with their physical principles." And prior even to such mental efforts men's thoughts were stimulated by commerce and travel; and "in those regions where the commercial aristocracy of ancient Greece mingled with its Eastern neighbours, the sciences were born." A quotation from Euripides follows standing on the same page of Hume with the sentence already quoted, and descriptive of the caprices practised by the popular deities in order that man may worship them the more. This was "the state of things to be displaced," says Dr. Tyndall, by the process of science, which "demands the radical extirpation of caprice, and the absolute reliance upon law in nature."

Among the great men who lead in this process of scientific extirpation, Democritus stands pre-eminent. Few men "have been so despitely used by history," under the name of the "laughing philosopher." But his true greatness was long since seen by Bacon, who "considered him to be a man of weightier metal than either Plato or Aristotle, though their philosophy was noised and celebrated in the schools amid the din and pomp of professors."

In his account of Democritus, Professor Tyndall frankly expresses his obligations to Lange's "History of Materialism" — "a work," he says, "to the spirit and letter of which I am equally indebted." He may well make this confession, for he can hardly be said in this part of his address to do more than repeat — no doubt in his own flowing language — Lange's description and analysis of the atomic philosophy. His summary of its principles in the fourth paragraph is little else than a translation from Lange, although with some variety in the order of the six propositions into which the summary is thrown in both cases — the combination of two of Lange's propositions into one, and the addition of a well-known principle elsewhere derived by our lecturer. The principles as given by the latter are briefly these: "1. From nothing comes nothing. Nothing that exists can be destroyed. All changes are due to the combination and separation of molecules. 2. Nothing happens by chance. Every occurrence has its cause from which it follows by necessity. 3. The only existing things are the atoms and empty space; all else is mere opinion. 4. The atoms are infinite in number and infinitely various in form; they strike to-

gether, and the lateral motions and whirlings which thus arise are the beginnings of the worlds. 5. The varieties of all things depend upon the varieties of these atoms in number, size, and aggregation. 6. The soul consists of free, smooth, round atoms like those of fire. These are the most mobile of all. They interpenetrate the whole body, and in their motions the phenomena of life arose."

As arranged in the first section of the first book of Lange's work (p. 7, 8), the most important of the Democritian principles stand as follows: "1. The principles of all things are atoms and empty space. All else is mere opinion. 2. There are infinite worlds in number and extent which continually arise and pass away. 3. Out of nothing comes nothing, and nothing can be destroyed. 4. The atoms are in continual movement, and all changes are to be explained by their combination and separation. 5. The varieties of things depend upon the varieties of their atoms in number and size; originally there is no qualitative difference of atoms. 6. Everything happens through necessity. Final causes are to be rejected."

There is just so much similarity betwixt the two statements as to show how liberally Dr. Tyndall has used Lange, and how truly, according to his own confession, he has been indebted to the "letter" as well as the spirit of the German historian of materialism. It would hardly have been worth while to point this out, save that he has borrowed still more largely from another work to which he alludes more than once, but without expressing at large his indebtedness — viz., Dr. Draper's "History of the Intellectual Development of Europe." When he drops Lange, he takes up Draper. The former serves as the basis of his address to the close of the paragraphs on Lucretius — the latter as the main source of its subsequent historical analysis, till he leaves the field of history and entertains us with the clever dialogue betwixt Bishop Butler and the disciple of Lucretius. It is not merely that he quotes facts and allusions; but all that he says as to the influence of the Arabian intellect during the middle ages, and "our scientific obligations to the Mahomedans," is almost literally transferred from the sixteenth chapter of Draper's work. The picture of scientific precocity presented by Alhazen, "about A.D. 1100;" the contrast betwixt the dirt and stupidity of the med-

iaeval Christians, and the "cleanliness, learning, and refinement" of the Moors; and the delicate allusion to "the undergarment of ladies," as retaining its Arab name to this hour,—are all from Draper. Considering how largely our lecturer has used Dr. Draper's work, it is a wonder that its author (who is still living) should not have come in for some of that fulsome eulogy which it is so much the habit of the members of this school to bestow upon one another, and which is so roundly administered in this very address. We observe that an admirer of Dr. Draper, who has "intimately known his work for ten years," and is greatly gratified by Professor Tyndall's obligations to it, yet expresses his disappointment that his "acknowledgment of them was not fuller, wider, and more emphatic." The paragraphs, he adds, "on the Arabs and Bruno are almost slavishly recast from Professor Draper's text."* Dr. Tyndall, indeed, expresses his "entire confidence" in Dr. Draper; and he has shown this confidence by the indiscriminate manner in which he has borrowed from him. He could hardly otherwise have adopted so one-sided and superficial an estimate of the scholastic philosophy, nor even committed himself to such a bit of learned pleasantry as that about the undergarment of ladies. A glance into Du Cange's "Dictionary of Mediæval Latin" would have satisfied him that *camisa* or *camisia* is of much older use than Dr. Draper or he seems to imagine. The truth is, that Draper's volumes, although not without a certain merit, are not of such solid value as to warrant the use made of them. A president of the British Association should go deeper for his facts and authorities. Hardly "the outcome of vigorous research" themselves, they cannot be the basis of any such research in others. Especially they are deceptive, in their one-sided and unsifted accumulations of details, and their thin and partial vein of generalization, to one who like Dr. Tyndall has abandoned himself with unreserved faith to their guidance, and simply transferred their generalizations to his pages.

There is nothing more characteristic of the members of the modern school than the confidence and admiration which they express towards all who agree with them. Names, however unknown or obscurely known, if only as-

sociated with some attack on theology, or some advance of materialistic speculation, are brought into the full blaze of applausive recognition. So far as ancient names are concerned, we do not ourselves much quarrel with this. We are glad to see men like Democritus and Epicurus, and Alhazen and Bruno, receive, it may be, even more than their measure of justice, as some of them may have hitherto received less than this measure. Church writers long had it their own way, and it is only fair that science should have its turn. Truth is not likely to be advanced, however, by men of science not only vindicating names which they may consider to have been aspersed in the past, but repeating towards others a similar exaggeration of abuse to that which they have deprecated when directed against their own intellectual ancestry. We have no objection to see both Democritus and Epicurus set upon their pedestals; but why should poor Aristotle not only be dethroned from his eminence, but degraded and kicked away in disgrace, like a lad who had got to the top of his class and kept it for years under false pretences?

Whewell [says Dr. Tyndall] refers the errors of Aristotle not to a neglect of facts, but to a "neglect of the idea appropriate to the facts; the idea of mechanical cause, which is force, and the substitution of vague or inapplicable notions, involving only relations of space or emotions of wonder." This is doubtless true; but the word "neglect" implies mere intellectual misdirection; whereas in Aristotle, as in Goethe, it was not, I believe, misdirection, but *sheer natural incapacity*, which lay at the root of his mistakes. As a physicist, Aristotle displayed what we should consider some of the worst attributes of a modern physical investigator — *indistinctness of ideas, confusion of mind, and a confident use of language which led to the delusive notion that he had really mastered his subject, while he had as yet failed to grasp even the elements of it. He put words in the place of things, subject in the place of object.*

This — and there is a good deal more of the same emphasis of abuse bestowed upon the old Stagirite — is hardly decent language in the mouth of a president of the British Association towards one who has so long held such a lofty pre-eminence. There may be good ground for lowering Aristotle from the position of intellectual authority which he has enjoyed almost beyond precedent, and to the disadvantage in many cases of a free and true method of investigation. But a man lives by his excellencies, and not by

* Spectator, August 29.

his faults; and the imperial faculties which in so many departments of knowledge so long swayed the human mind, will not suffer from Dr. Tyndall's aspersions. The true way, of course, to test Aristotle, as well as any ancient name, is not by comparing him with any "modern physical investigators," but with the investigators and thinkers of his own time. Professor Tyndall, it has been well said, would be at a loss to "offer a shadow of proof that the physical inquiries of the atomists were conducted on sounder principles than those of the Stagirite—for example, that the arguments of Epicurus for the existence of a vacuum were a whit more satisfactory than the opposite arguments of Aristotle."*

It is curious to trace the revival of the atomic philosophy and the rejuvenescence of its great leaders, Democritus and Epicurus, with every repeating wave of materialistic speculation. Some of Dr. Tyndall's auditors probably heard of the philosopher of Abdera for the first time; and many more of them, it is no want of charity to say, had no conception either of his historical position or of his special opinions. Even Dr. Tyndall himself appears to have been somewhat hazy about his position, when he speaks of him in connection with Empedocles, and of the latter noticing a "gap in the doctrine of the former," and striking in to fill it up. The four "rudiments" of Empedocles are generally supposed to represent a prior stage of speculation to the "atoms" of Democritus. To a slip of this kind little importance need be attached. But it is surely absurd for our modern positive philosophers, with their advanced ideas, to make so much of these ancient names. Even if it were true, that more than two thousand years ago the "doctrine of the 'survival of the fittest,' which in our day, not on the basis of vague conjecture, but of positive knowledge, has been raised to such extraordinary significance, had received at all events partial enunciation"—it would not matter in the least as to the truth of this doctrine, or the truth of the views with which it is associated. If we must discard Plato and Aristotle, we are not likely to shelter ourselves under the cloak of Democritus or Empedocles. Even if the former has been "despitefully used" by history, and we are wrong in regarding him as the "laughing phil-

osopher," at any rate we know little or nothing of his philosophy. For, says Mr. Lewes—whose authority should be congenial to Dr. Tyndall—speaking of the evidence which survives on the subject, it is "so obscure that historians have been at a loss to give it (the system of Democritus) its due position in relation to other systems. Reinhold, Brandis, Marbach, and Hermann view him as an Ionian; Buhle and Tennemann, as an Eleatic; Hegel, as the successor of Heraclitus; Ritter, as a sophist; and Zeller, as the precursor of Anaxagoras." Ferrier is inclined to claim him, with all his materialistic tendencies, as in some degree an adherent of the philosophy of the absolute.* Altogether he is a shadowy figure, and probably owes something of his very vitality to the vagueness of his outline, and the ease with which the modern mind reads its own meaning into him.

In the seventeenth century, when the first wave of materialistic speculation passed over England, it was in the same manner Democritus and Epicurus who came to the front as its representatives. They impersonated to Cudworth and others that "atheism of atomicism" with which they fought so stoutly. And what is particularly deserving of notice is, that then, as now, a clear discrimination was made by all enlightened theists betwixt the atomic theory itself as a physical hypothesis, and the materialistic atheism which has been associated with it. The former is a perfectly valid theory, resting on its own evidence, and, according to Cudworth, as ancient as speculation itself. In its true interpretation it professed to explain the *physical origin* of the universe, and nothing else. As such, theism has nothing to say against it. "But Leucippus and Democritus, and after them Protagoras and Epicurus, cast off the spiritual side of the philosophy, and left only the material. They took away the highest part, and left only, as Cudworth says, the 'meanest and lowest.'"† In this respect Hobbes

* Lewes's Hist. of Philosophy, vol. i. p. 96, 97; Ferrier's Greek Philosophy, p. 163. Some fragments of Democritus survive, gathered from Aristotle and others. They were published at Berlin in 1843 by Mullach, under the title *Democriti Abderita operum fragmenta*. Of Epicurus the philosophical remains (found among the rolls at Herculaneum, and published by Orelli, 1818) are still more imperfect. Not one of the 300 volumes ascribed to him survives.

† See Rational Theology and Christian Philosophy, vol. ii. p. 249, by Principal Tulloch, where the conflict of materialism with Christian thought in the seventeenth century is fully told.

* Letter on Dr. Tyndall's address by Professor Smith Robertson.

followed them in the seventeenth century, just as others are doing in the nineteenth. It may surely be said that the course of materialistic thought shows little sign of originality. With all the commotion it again makes in our day, it is where it was, standing by the names of Democritus, Epicurus, and Lucretius. It vaunts itself of new and higher methods of investigation, but its theories are not a whit more valid and satisfactory than they were in former centuries; and the powerful language of Lucretius, to which the pen of Tyndall naturally reverts, is probably to this day their best and most felicitous expression.

But, absurd as is all this historical appeal on such a subject, and especially so in a school whose pretension it is to disclaim authority, it is far more excusable than the manner in which living names are used by the same school. Anything more offensive than the vulgar admiration so largely interchanged amongst its members it is hard to imagine, and Dr. Tyndall's address is a conspicuous instance of this offensiveness. His friends and admirers are everywhere bespattered with the most ridiculous praise; while, as if to set off their merits to more advantage, we have a strongly-drawn picture of those "loud-tongued denunciators" who venture to open their lips against the divine claims of science—"rash and ill-informed persons who have been hitherto so ready to *thrust* themselves against every new scientific revelation, lest it should endanger what *they are pleased to consider theirs*." These "objectors," like the noxious thistle which "produces a thistle and nothing else," "scatter their germs abroad, and reproduce a new kind, ready to play again the part of their intellectual progenitors; to show the same virulence, the same ignorance; to achieve for a time the same success; and, finally, to suffer for a time the same inexorable defeat." In comparison with this noxious race stand the enlightened group of evolutionists, who are now leading the van of the world's thought, with Mr. Charles Darwin and Mr. Herbert Spencer at their head. The former is a man of "profound and synthetic skill," who "shirks no difficulty," and has so "saturated" his subject "with his own thought," that he must "have known better than his critics the weakness as well as the strength of his theory." This, Dr. Tyndall continues, would be of little avail were Mr. Darwin's object "a temporary

dialectic victory, instead of the establishment of the truth which he means to be everlasting. But he takes no pains to disguise the weakness he has discovered; nay, he takes every pains to bring it into the strongest light. His vast resources enable him to cope with objections started by himself and others, so as to leave the final impression upon the reader's mind that if they be not completely answered, they certainly are not fatal. This largeness of knowledge and readiness of resource render Mr. Darwin the most terrible of antagonists. He treats every objection with a soberness and thoroughness which even Bishop Butler might be proud to imitate," and all "without a trace of ill-temper. . . . But though in handling this mighty theme all passion has been stilled, there is an emotion of the intellect incident to the discernment of new truth which often colours and warms the pages of Mr. Darwin."

Mr. Darwin, we trust, has more good sense than to welcome this outburst of nauseous compliment. An accomplished naturalist, with rare powers of observation, and an entertaining and often graceful power of describing the results of his patient and prolonged investigations, he is eminently deserving of all due honour. Whatever merit there may be in the elucidation of the principle of natural selection to which he has devoted his life, let him by all means have it. For ourselves, we believe that the importance of the principle has been greatly exaggerated. But, withal, Mr. Darwin is as little of a philosopher as any man who ever lived. His genius is almost solely a genius of observation and narration, with very faint powers of argument, and, as it appears to us, with almost no depth of synthetic insight. He fails frequently to understand the true meaning of the facts which he describes, and still more frequently the higher conclusions to which they plainly lead. He is weak in logic, and especially weak in every attempt to rise into the higher region which he sometimes essays of abstract discussion; and this mainly owing to that very absorption of mind with his own subject, which Dr. Tyndall considers one of his special merits. If there was no other evidence of all this, and of the confusion of thought which runs through a great deal of Mr. Darwin's most ingenious writing, the fact that, according to his ardent encomiast, "he needed an expounder," would suffice to

prove as much. This expounder he found in Mr. Huxley; and, of course, Dr. Tyndall "knows nothing more admirable in the way of scientific exposition than those early articles of Mr. Huxley on the origin of species." In a similar manner Mr. Herbert Spencer comes in for his share of glory as "the apostle of the understanding,"—"whose ganglia are sometimes the seat of a nascent poetic thrill."

But enough of this. We have taken the pains to point out these features of Dr. Tyndall's address, because they furnish conspicuous evidence of an increasing vice in contemporary literature. It is bad enough that the intellectual world should be divided into so many schools as it is. It narrows intellectual work, and sectarianizes culture. Our scientific and literary coteries jostle one another like so many sects in the religious world, each often with a jargon of its own, and a mission in comparison with which nothing else is of any consequence. This is sufficiently intolerable; but it is still more intolerable that these coteries should constitute themselves into societies for mutual admiration, and that the chair of the British Association should not be free from this vulgar species of flattery. If Mr. Darwin, Mr. Herbert Spencer, and others, are really the great philosophers which their friends and admirers declare them to be, then their intellectual character may be safely left to the future. They do not need to have their merits emblazoned as on a sign-post for the applauding gaze of the "common herd." The evolutionists should leave this exaggerated talk to others whom they are apt to despise, and remember that the habit of emphasis is seldom the sign of a strong cause, and never the sign of the highest range of intellectual simplicity and power.

We said in the outset that one of the main objects of Dr. Tyndall's address was to emphasize an antagonism betwixt religion and science; and to this more important point we must return. There is a certain sense, indeed, in which he and all his school are deferential towards religion, and even warmly disposed to allow its claims. In the close of his address he adverts to these claims, and makes his meaning sufficiently clear. Religious feeling is an undoubted element of human nature, and cannot be ignored by any wise observer, no more than "that most powerful of passions—the amatory passion," which Mr. Spencer (of course)

has indicated as "antecedent" in its first occurrence "to all relative experiences whatever"! "There are such things woven into the texture of man as the feeling of awe, reverence, and wonder; and not alone the sexual love just referred to, but the love of the beautiful, physical, and moral, in nature, poetry, and art. There is also that deepest feeling which, since the earliest dawn of history, and probably for ages prior to all history, incorporated itself in the religions of the world. You, who have escaped from these religions" (the scientific fledglings, we presume, surrounding the chair of the British Association) "into the high-and-dry light of the intellect, may deride them; but in so doing you deride accidents of form merely, and fail to touch the immovable basis of the religious sentiment in the nature of man. To yield this sentiment reasonable satisfaction is the problem of problems at the present time. And grotesque in relation to scientific culture as many of the religions of the world have been and are—dangerous, nay, destructive to the dearest privileges of freemen as some of them undoubtedly have been, and would, if they could, be again—it would be wise to *recognize them as the forms of a force, mischievous if permitted to intrude on the region of knowledge, over which it holds no command, but capable of being guided to noble issues in the region of emotion, which is its proper and elevated sphere*." Again, in almost the closing words of the lecture, we are told that "the world embraces not only a Newton but a Shakespeare, not only a Boyle but a Raphael, not only a Kant but a Beethoven, not only a Darwin but a Carlyle." Not in each of these, but in all, is human nature whole. They are not opposed, but supplementary—not mutually exclusive, but reconcilable. And if, unsatisfied with them all, the human mind, with the yearning of a pilgrim for his distant home, will turn to the mystery from which it has emerged, seeking so to fashion it as to give unity to thought and faith; so long as this is done, not only without intolerance or bigotry of any kind, but with the enlightened recognition that ultimate fixity of conception is here unattainable, and that each succeeding age must be left free to fashion the mystery in accordance with its own needs,—then, in opposition to all the restrictions of materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the *knowing* faculties, may be called the

creative faculties of man. Here, however,"—and with this sentence the original lecture concluded—"I must quit a theme too great for me to handle, but which will be handled by the loftiest minds ages after you and I, like streaks of morning cloud, shall have melted into the infinite azure of the past."

This bit of rhetorical pathos has been removed in the address as published by Messrs. Longman, and two quotations substituted,—one of them a well-known quotation from Wordsworth's "Tintern Abbey," and the other a remark of Goethe—"Fill thy heart with it, and then receive it as thou wilt."

These extracts are to be taken for what they are worth. They seem to many to mean a great deal—to open, as it were, a new door for religion when the old one has been shut. They are all the more deserving of notice because they contain a certain measure of truth, which every enlightened student of the history of religious opinion recognizes. The conclusive beliefs of mankind as to the objects of religion necessarily undergo modification and change "with each succeeding age." No one who has pondered the subject would be disposed to claim, in the region of religious knowledge, "an ultimate fixity of conception." But this is something very different from Dr. Tyndall's position. He denies, it is obvious, not only the adequacy of our religious ideas—but that these ideas have any veritable objects at all. Such religion as he would condescendingly make room for is a religion of mere subjectivity, not "permitted" to intrude on the region of *knowledge*, but confined to its proper sphere of *emotion*. In short, it is such a religion as *need not, in any sense, be true*—a mere emotional flower on the upspringing growth of humanity, having no deeper root than the vague soil of wonder or of tenderness that lies in human nature, and pointing no-whither,—such a religion, therefore, as may perfectly consist with a doctrine of material evolution. Suppose man, along with all other creatures, to be a mere efflux of nature—to come forth from her teeming womb, as the universal mother—and you may have such religion as grows with other growths from this fruitful source. Religion, like other things, is a part of the general evolution, and must be allowed its sphere.

It is hardly necessary to say that this is an essentially different conception of religion from that which is embodied in

Christianity, and recognized by all Christian churches. And it is well that the clear distinction betwixt the two systems should be understood. According to the one, man is the mere product of nature—the highest organism which its teeming and fertile power has thrown off in its ever-upward movement. According to the other, he is not only at the head of nature as its highest consequence, but as endowed with a reasonable soul which is the divine image, and not the mere play of natural forces, however subtle or beautiful.

This is the essential question betwixt the two schools, What is man? or, more strictly, What is mind in man?—a question as old as the dawn of speculation, and which the progress of science, with all its modern pretensions, is no nearer solving than it was centuries ago. This deeper question it is which lies at the root of all the modern contention about the idea of design in nature. If mind, of course, is merely one form of force amongst many, why should it be conceived of as underlying other forms, and regulating and controlling them? As Hume long ago put it, with a pertinence which none of his followers have rivalled, "What peculiar privilege has this little agitation of the brain, which we call thought, that we must thus make it the model of the universe?"* Why should the source of the universe be conceived as analogous to it rather than to what we call matter? The modern scientific school has deliberately espoused the rights of matter. Some of its members may say, that in the end they cannot tell whether the source of being is material or spiritual. "Matter may be regarded as a form of thought—thought may be regarded as a property of matter; each statement has a certain relative truth."† But beneath all this indifference and frequent confusion of language, there is an essential discrepancy in the two modes of thought which touches almost every aspect of life and determines the true character of religion. Dr. Tyndall is well aware of this, and his language leaves no doubt on which side he is proud to rank himself.

In speaking of the origination of life, he says he does not know what Mr. Darwin conclusively thinks of it.

Whether he does or does not introduce his "primordial form" by a creative act I do not

* Dialogues concerning Natural Religion, part ii.

† Professor Huxley.

know. But the question will inevitably be asked, "How came the form there?" With regard to the diminution of the number of created forms, one does not see that much advantage is gained by it. The anthropomorphism which it seemed the object of Mr. Darwin to set aside, is as firmly associated with the creation of a few forms as with the creation of a multitude. We need clearness and thoroughness here. Two courses, and two only, are possible. Either let us open our doors freely to the conception of creative acts, or, abandoning them, let us radically change our notions of matter. If we look at matter as pictured by Democritus, and as defined for generations in our scientific textbooks, the absolute impossibility of any form of life coming out of it would be sufficient to render any other hypothesis preferable; but the definitions of matter given in our textbooks were intended to cover the purely physical and mechanical properties; and taught, as we have been, to regard these definitions as complete, we naturally and rightly reject the monstrous notion that out of *such* matter any form of life could possibly arise. But are the definitions complete? Everything depends upon the answer to be given to this question. Trace the line of life backwards, and see it approaching more and more to what we call the purely physical condition. We reach the *protogenes* of Haeckel, in which we have "a type distinguishable from a fragment of albumen only by its finely granular character." Can we pause here? We break a magnet, and find two poles in each of its fragments. We continue the process of breaking; but however small the parts, each carries with it, though enfeebled, the polarity of the whole. And when we break no longer, we *prolong the intellectual vision to the polar molecules*. Are we not urged to do *something* similar in the case of life? Is there not a temptation to close, to some extent, with Lucretius, when he affirms that "Nature is seen to do all things spontaneously of herself without the meddling of the gods;" or with Bruno, when he declares that matter is not "that mere empty capacity which philosophers have pictured her to be, but the universal mother who brings forth all things as the fruit of her own womb"? The questions here raised are inevitable. They are approaching us with accelerated speed, and it is not a matter of indifference whether they are introduced with reverence or irreverence. *Abandoning all disguise, the confession that I feel bound to make before you is, that I prolong the vision backward across the boundary of the experimental evidence, and discern in that matter which we, in our ignorance, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of every form and quality of life.*

In his address, as revised and published by himself, Dr. Tyndall has slight-

ly modified the expressions of this significant passage. The conclusion to which he comes no longer appears as "a confession" which he is bound to make, but as "an intellectual necessity." "The vision of the mind" is introduced as authoritatively supplementing "the vision of the eye." And in the end, as throughout, in the description of matter, and its identity with every form of life, there is more the semblance of reasoning, and less the air of a devotee eager to proclaim his gospel of materialism.

At the best, however, it requires only the most cursory examination of the passage to see how far the lecturer commits himself, and in so doing, how far he exceeds the bounds of science. Plainly, according to his own words, he makes a leap from the visible to the invisible. Whether this leap be made in the strength of faith, or of "an intellectual necessity," is little to the point. Intellectual necessities are as little valid as faith in the school of science or the sphere of mere observation and experiment. "*Hypotheses non fingo*" was the old motto of physicism; and it is an absolute motto of all true science, discarded as it has been by the modern school. When once a conclusion is made to hang not on observed facts, and the generalizations in which the facts verify themselves, but upon a vision confessedly prolonged beyond the facts, and crossing the boundary of experimental evidence, it is no longer in any sense a scientific conclusion. It may be as visionary as — it probably is far more so than — any of those theological or so-called anthropomorphic conclusions which are the special bane of Dr. Tyndall. It is indeed a strange outcome of all our boasted scientific progress, before which so many theological spectres are to disappear, and the reign of natural law over all things is to be inaugurated, that its last word for us is as pure an hypothesis as the scholastic or religious genius of past ages ever conceived. What has this genius in its wildest flights ever done more than prolong its vision beyond the bounds of experience, and confidently apply the suggestions of one department of knowledge to another, or, in the language of the address, do *something* similar, in the one as in the other? If men have erred in the past, in judging too much of nature by themselves, and investing it with their own limitations, which may be readily admitted, does this warrant the modern physicist in applying to man, or

obedience to which there is wrong and misery, the very idea of religion disappears. It is needless to talk of our emotions of wonder and awe and tenderness finding their natural scope, and creating for themselves appropriate vehicles of religious sentiment—changing with the changing thoughts of successive ages. They will do this, no doubt. Religious sentiment will assert itself, do what we will. As Strauss has shown, men will worship the *Universe*—for which Dr. Tyndall's potential matter may very well stand—rather than worship nothing at all. But, after all, such nature-worship, or mere emotional piety, does not deserve the name of religion—the essential idea of which is surely to exercise some restraining moral power over man. And how can you get this power, if you have no moral or rational fixity beyond man himself? Laws of nature are very good, and we will always be better to know these laws and to obey them; but what man needs in all his higher being is not merely blind restraint, but moral restraint—and not merely this, but moral education. And how can this come to him except from a mind above him—an intelligent Being—not in dream or fancy, but in reality at the centre of all things—“who knoweth his frame, and remembereth that he is dust”—in whose living will is the control of all things, and who yet numbereth the hairs of his head, and “without whom not a sparrow falleth to the ground”?

It should be said, in conclusion, that the antagonism which is everywhere in the writings of evolutionists, and especially so in Dr. Tyndall's address, presumed to lie betwixt the idea of evolution and the old idea of design or mind in nature, is entirely gratuitous. Even if the hypothesis of evolution were proved, and science were able to demonstrate the continuity of nature from first to last, this would not render the idea of a divine mind originating nature and working in it through all its evolutions the less tenable. The intellectual necessity which demands a creative mind or an intellectual origin of all things would remain the same. The evidence of what is called design might be modified, but it would not be the less clear and forcible. For it is an essential mistake underlying all the thought of the modern school that the ideas of design and of continuity or order are incompatible—a mistake arising from the excess of that very anthropomorphism which they so much repudi-

ate in their opponents. Continually they write as if design, intention, purpose, applied to nature, were necessarily of the same tentative and irregular character as the operations of human genius. It is the mere human mechanician they imagine, and suppose others to imagine, when they speak contemptuously of the theistic conception. But no modern theist makes use of such words in any such sense as they suppose. The idea of design is no longer a mere mechanical idea, as if representing the work of a human artificer, but simply a synonym for some manifestation of order, or group of regulated or subordinated facts. The notion of design which the modern school repudiate, was in fact never anything but a caricature. It is impossible for them, or for any, to conceive too grandly of nature, or of the unbroken harmony and continuity of its movements. The very magnificence of its order is only a further illustration of divine wisdom; for surely the very thought of a divine mind implies the perfection of wisdom, or, in other words, of order, as its expression. The more, therefore, the order of nature is explained and its sequences seen to run into one another with unbroken continuity, only the more and not the less loftily will we be able to measure the working of the divine mind. The necessity which makes us postulate such a mind has nothing to do with *special phenomena or the modes of their production*. It is a purely rational necessity, the dictate of our highest consciousness and insight into the meaning both of man and of the world around him. The intellectual compulsion which forces Dr. Tyndall across the boundary of experimental evidence to “discern in nature the promise and potency of all terrestrial life” appears to us far less reasonable or well founded than that which has forced so many of the highest and most philosophical intellects of all ages to recognize this promise and potency—not in matter but in mind. And, this recognition once made, the mere modes of natural phenomena are of no consequence. They may be after the manner of special contrivance or of continuous development—it matters not. Religion has no concern with any mere physical theories of the origin of the universe. It has no quarrel, or ought to have none, with either atomism or evolution when kept within their proper sphere. So Cudworth announced long ago. Nothing within the province of nature, no change

in the manner in which science comes to view its operations, affects the primal thought. Mind is there, as "the light of all our seeing," whether nature works, or rather is worked, by evolution or by special fiat. Science is free to reveal its plans, to modify our notions of its plans, and to exalt them as it can; but the mere fact *that they are plans*, under any mode of conception, is the witness to our minds of another mind behind all. Mind is, in short, the synonym of order everywhere—it matters not what may be the special form of that order.

It would be well if both our scientific men and our theologians would see and acknowledge that more plainly. It clears for the one the whole province of nature to investigate as they will—to unfold and explain as they can: It would ease the other from all apprehension of the progress of science. Nothing in that progress can ever touch the great conclusions of religion, which take their rise in a wholly different sphere, and find all their life and strength elsewhere. In so far as theology in the past may have intruded upon science, and refused its claims of investigation and of judgment in the domain of nature, theology was in error; and it ought to be grateful rather than recriminatory that science has taught it its error. At the same time, science need hardly harp, as with Dr. Tyndall it does, over the old strain of persecution. It is time to forget old conflicts which all wise thinkers have abandoned; and it is hardly a sign of that healthy life which he and others proclaim as the chief characteristic of the modern giant, rejoicing as a strong man to run his race—to have such a plaint made over its old sorrows. Dr. Tyndall knows well enough that the days of persecution have ended *on the side of religion*. It is not from the theologian that danger is any longer to be apprehended in that direction. Let him pursue his investigations without fear or alarm. But let him also bear in mind that, if science has her rights, so has religion, and that the great ideas which lie at the foundation of all religion are unspeakably precious to many minds no less enlightened than his own, if not exactly after his fashion of enlightenment. What such minds resent in his address is not, what he seems to think, any free handling of old ideas, so far as they come legitimately within the

range of science—but the constant insinuation that these new conceptions of science are at variance with the old truths of religion, or with the truths of a personal God and of immortality. Dr. Tyndall may be able to conceive of religion apart from these truths. He may or may not himself be a materialistic atheist. We are glad to see that he disavows the charge in the preface which he has published to his address. We have certainly not made it against him. Nor is it, let us say, of consequence what Dr. Tyndall's own views of religion are. This is a point quite beside the purpose. If he has, like other men, his "times of weakness and of doubt," and again his "times of strength and of conviction"—of healthier thought when the doctrine of "material atheism" seems to fall away from him—this is his own concern. And we should deem it impertinent to obtrude upon either his darker or his brighter hours. *Sursum corda*, we might say to him, by way of brotherly encouragement, but nothing more. What we and the public have to do with are not Dr. Tyndall's moods of mind, nor his personal creed, but his treatment of grave questions in the name of science. That treatment, in our judgment, and in the judgment of many besides, has been neither dignified nor just. It has meddled with much which lay quite outside his province, and upon which science, following its only true methods, can never be able to pronounce. It has been, if not incompetent, yet highly inadequate and unphilosophical, constantly suggesting what it has not proved, and leading, without excuse, the thoughts of his hearers towards wild negations—hanging out, in short, old rags of Democritism as if they were new flags of scientific triumph.

It is very easy for Dr. Tyndall to speak of the fierceness of his critics, and to give them, from his scornful isolation, "the retort courteous." It is always easy to be mild when one cares little about a matter; but the deeper feeling, he may be sure, which has been called forth by his address, is one of regret that he should have used so ill a great opportunity, and in the name of the British Association said so much which can neither do honour to that Association, nor to the cause of science with which it is identified.

From The Cornhill Magazine.
THREE FEATHERS.

CHAPTER XVIII.

CONFIDENCES.

MEANWHILE, during the time that Wenna Rosewarne had been up at Trelyon Hall, her place in the inn had been occupied by a very handsome, self-willed, and gay-hearted young lady, who had endeavoured, after a somewhat wild fashion, to fulfil her sister's duties. She had gone singing through the house to see that the maids had put the rooms right; she had had a fight with Jennifer about certain jellies; she had petted her mother and teased her father into a good humour, after which she went outside in her smart print dress and bright ribbons, and sat down on the bench of black oak at the door. She formed part of a pretty picture there; the bright April day was still shining all around, on the plashing water of the mill, on the pigeons standing on the roof, and on the hills beyond the harbour, which were yellow with masses of furze.

"And now," said this young lady to herself, "the question is, can I become a villain? If I could only get one of the persons out of a story to tell me how they managed to do it successfully, how fine that would be! Here is the letter in my pocket — of course it has his address in it. I burn the letter. Wenna doesn't write to him. He gets angry, and writes again and again. I burn each one as it comes; then he becomes indignant, and will write no more. He thinks she has forsaken him, and he uses naughty words, and pretends to be well rid of her. She is troubled and astonished for a time; then her pride is touched, and she won't mention his name. In the end, of course, she marries a handsome young gentleman, who is really in love with her, and they are so very happy — oh, it is delightful to think of it! and then a long time after, the other one comes home, and they all find out the villain — that's me — but they are all quite pleased with the way it has ended, and they forgive me. How clever they are in stories to be able to do that!"

She took a letter out of her pocket, and furtively looked at it. It bore a foreign postmark. She glanced round to see that no one had observed her, and concealed it again.

"To burn this one is easy. But old Malachi mightn't always let me rummage

his bag; and a single one getting into Wenna's hands would spoil the whole thing. Besides, if Wenna did not write out to Jamaica he would write home to some of his friends — some of those nice, cautious, inquiring clergymen, no doubt, about the Hall — to let him know; and then there would be a pretty squabble. I never noticed how the villains in the stories managed that; I suppose there were no clever clergymen about, and no ill-tempered old postman like Malachi Lean. And oh! I should like to see what he says — he will make such beautiful speeches about absence, and trust, and all that; and he will throw himself on her mercy, and he will remind her of her engaged ring."

Mabyn laughed to herself — a quiet, triumphant laugh. Whenever she was very down-hearted about her sister's affairs, she used to look at the gypsy-ring of emeralds, and repeat to herself —

Oh, green's forsaken,
And yellow's forsworn,
And blue is the sweetest
Colour that's worn!

— and on this occasion she reflected that perhaps, after all, it was scarcely worth while for her to become a villain in order to secure a result that had already been ordained by fate.

"Mab," said her father, coming out to interrupt her reflections, and speaking in a peevishly indolent voice; "where's Wenna? I want her to write some letters, and to go over to the Annots. Of course your mother's ill again, and can't do anything."

"Can't I write the letters?" said Mabyn.

"You? you're only fit to go capering about a dancing-academy. I want Wenna."

"Well, I think you might let her have one forenoon to herself," Mabyn said, with some sharpness; "she doesn't take many holidays. She's always doing other people's work, and when they're quite able to do it for themselves."

Mabyn's father was quite insensible to the sarcasm; he said, in a complaining way, —

"Yes, that's sure enough; she's always meddling in other people's affairs, and they don't thank her for it. And a nice thing she's done with those Annots. Why, that young Hannabel fellow was quite content to mind his own bit of farm like any one else until she put it into his head to get a spring-cart, and drive

all the way down to Devonport with his poultry, and now she's led him on so that he buys up the fish, and the poultry, and eggs, and butter and things from all the folks about him to sell at Devonport; and of course they're raising their prices, and they'll scarcely deal with you except as a favour, they've got so precious independent. And now he's come to the Tregear farm, and if Wenna doesn't interfere, they'll be contracting with him for the whole of the summer. There's one blessed mercy, when she gets married she'll have to stop that nonsense, and have to mind her own business."

"Yes," said Mabyn, with some promptitude, "and she has been left to mind her own business pretty well of late."

"What's the matter with you, Mabyn?" her father carelessly asked, noticing at length the peculiarity of her tone.

"Why," she said, indignantly, "you and mother had no right to let her go and engage herself to that man. You ought to have interfered. She's not fit to act for herself—she let herself be coaxed over, and you'll be sorry for it some day."

"Hold your tongue, child," her father said, "and don't talk about things you can't understand. A lot of experience you have had! If Wenna didn't want to marry him, she could have said so; if she doesn't want to marry him now, she has only to say so. What harm can there be in that?"

"Oh, yes; it's all very simple," the girl said to herself, as she rose and went away; "very simple to say she can do what she pleases; but she can't, and she should never have been allowed to put herself in such a position, for she will find it out afterwards if she doesn't now. It seems to me there is nobody at all who cares about Wenna except me; and she thinks I am a child, and pays no heed to me."

Wenna came in; Mabyn heard her go up-stairs to her own room, and followed her.

"Oh, Wenna, who gave you this beautiful basket of primroses?" she cried, guessing instantly who had given them. "It is such a pretty present to give to any one!"

"Mrs. Luke's children gathered them," Wenna said, coldly.

"Oh, indeed; where did the basket come from?"

"Mr. Trelyon asked them to gather me the primroses," Wenna said impatiently; "I suppose he got the basket."

"Then it is his present?" Mabyn cried. "Oh, how kind of him! And see, Wenna—don't you see what he has put in among the primroses? Look, Wenna—it is a bit of *None-so-pretty*. Oh, Wenna, that is a message to you!"

"Mabyn," her sister said, with a severity that was seldom in her voice, "you will make me vexed with you if you talk such nonsense. He would not dare to do such a thing—why, the absurdity of it! And I am not at all well-disposed towards Mr. Trelyon at this moment."

"I don't see why he shouldn't," said her sister humbly, and yet with a little inadvertent toss of the head; "every one knows you are pretty except yourself, and there can be no harm in a young man telling you so. He is not a greater fool than anybody else. He has got eyes. He knows that every one is in love with you—every one that is *now* in Eglosilvan, any way. He is a very gentlemanly young man. He is a great friend to you. I don't see why you should treat him so."

Mabyn began to move about the room, as she generally did when she was a trifle excited and indignant, and inclined to tears.

"There is no one thinks so highly of you as he does. He is more respectful to you than to all the people in the world. I think it is very hard and unkind of you."

"But, Mabyn, what have I done?" her sister said.

"You won't believe he sent you that piece of *None-so-pretty*. You won't take the least notice of his friendliness to you. You said you were vexed with him."

"Well, I have reason to be vexed with him," Wenna said, and would willingly have left the matter there.

But her sister was not to be put off. She coaxed for a few minutes, then became petulant, and affected to be deeply hurt; then assumed an air of authority, and said that she insisted on being told. Then the whole truth came out. Mr. Trelyon had been lending to Mr. Roscorla a sum of money which he had no business to lend. Mr. Trelyon had somehow mixed her up with the matter, under the impression that he was conferring a service on her. Mr. Trelyon had concealed the whole transaction from her, and, of course, Mr. Roscorla was silent also. And on the face of it Mr. Trelyon was responsible for Mr. Roscorla going away from his native land to face all manner of perils, discomforts, and anxieties; for without that fatal sum of money he might

still have been living in peace and contentment up at Basset Cottage.

"Well, Wenna," said the younger sister, candidly, and with a resigned air, "I never knew you so unreasonable before. All you seem able to do is to invent reasons for disliking Mr. Trelyon, and I have no doubt you used him shamefully when you saw him this forenoon. You are all love and kindness to people who have no claim on you—to brats in cottages and old women, but you are very hard on people who—*who respect you*. And then," added Miss Mabyn, drawing herself up, "if I were to tell you how the story of that money strikes me, would it surprise you? Who asked Mr. Roscorla to have the money and to go away? Not Mr. Trelyon I am sure. Who concealed it? Whose place was it to come and tell you—you who are engaged to him? If it comes to that, I'll tell you what I believe, and that is that Mr. Roscorla went and made use of the regard that Harry Trelyon has for you to get the money. There!"

Mabyn uttered the last words with an air which said, "*I will speak out this time, if I die for it.*" But the effect on her sister was strange. Of course, she expected Wenna to rise up indignantly and protest against her speaking of Mr. Roscorla in such a way. She was ready to brave her wrath. She fully thought they were entering on the deadliest quarrel that had ever occurred between them.

But whether it was that Wenna was too much grieved to care what her sister said, or whether it was that these frank accusations touched some secret consciousness in her own heart, the elder sister remained strangely silent, her eyes cast down. Mabyn looked at her, wondering why she did not get up in a rage: Wenna was stealthily crying. And then, of course, the younger sister's arms were round her in a minute, and there was a great deal of soothing and tender phrases; and finally Mabyn, not knowing otherwise how to atone for her indiscretion, pulled out Mr. Roscorla's letter, put it in Wenna's hand, and went away.

CHAPTER XIX.

THE FIRST MESSAGE HOME.

WENNA was glad to have the letter at that moment. She had been distracted by all this affair of the money; she had been troubled and angry—with whom she could scarcely tell; but here was something that recalled her to a sense of

her duty. She opened it, resolved to accept its councils and commands with all due meekness. For such kindness as he might choose to show, she would be grateful, and she would go back to her ordinary work more composed and cheerful, knowing that, whatever business affairs Mr. Roscorla might transact, her concern was only to remain loyal to the promises she had made, and to the trust which he reposed in her.

And the letter was in reality a kind and friendly letter, written with a sort of good humour that did not wholly conceal a certain pathetic consciousness of distance and loneliness. It gave her a brief description of the voyage; of the look of the place at which he landed; of his meeting with his friends; and then of the manner in which he would have to spend his time while he remained in the island.

"My head is rather in a whirl as yet," he wrote, "and I can't sit down and look at the simple facts of the case—that every one knows how brief, and ordinary, and commonplace a thing a voyage from England to the West Indies is, and how, looking at a map, I should consider myself as only having run out here for a little trip. At present my memory is full of the long nights and of the early mornings, and of the immeasurable seas that we were always leaving behind, so that now I feel as if England were away in some other planet altogether, that I should never return to. It seems years since I left you at Launceston Station; when I look back to it I look through long days and nights of water, and nothing but water, and it seems as if it must be years and years before I could see an English harbour again, all masts, and smoke, and hurry, with posters up on the walls, and cabs in the streets, and somewhere or other a railway-station where you know you can take your ticket for Cornwall, and get into your old ways again. But I am not going to give way to home-sickness; indeed, my dear Wenna, you need not fear that, for, from all I can make out, I shall have plenty to look after, and quite enough to keep me from mooning and dreaming. Of course I cannot tell you yet how things are likely to turn out, but the people I have seen this morning are hopeful, and I am inclined to be hopeful myself, perhaps because the voyage has agreed with me very well, and has wonderfully improved my spirits. So I mean to set to work in good earnest, with the assurance that you are not indif-

ferent to the results of it; and then, some day, when we are both enjoying these, you won't be sorry that I went away from you for a time. Already I have been speculating on all that we might do if this venture turns out well, for of course there is no necessity why you should be mewed up in Eglosilyan all your life, instead of feeling the enjoyment of change of scene and of interests. These are castles in the air, you will say, but they naturally arise in the mind when you are in buoyant health and spirits; and I hope, if I return to England in the same mood, you will become infected with my confidence, and add some gaiety to the quiet serenity of your life."

Wenna rather hurried over this passage; the notion that she might be enabled to play the part of a fine lady by means of the money which Harry Trel-yon had lent to her betrothed was not grateful to her.

"I wish," the letter continued, "that you had been looking less grave when you had your portrait taken. Many a time, on the voyage out, I used to fix my eyes on your portrait, and try to imagine I was looking at it in my own room at home, and that you were half a mile or so away from me, down at the inn in the valley. But these efforts were not successful, I must own; for there was not much of the quiet of Eglosilyan around you when the men were tramping on the deck overhead and the water hissing outside, and the engines throbbing. And when I used to take out your photograph on deck, in some quiet corner, I used to say to myself, 'Now I shall see Wenna just as she is to-day, and I shall know she has gone in to have a chat with the miller's children, or she is reading out at the edge of Black Cliff; or she is contentedly sewing in her little parlour.' Well, to tell you the truth, Wenna, I got vexed with your photograph; I never did think it was very good — now I consider it bad. Why, I think of you as I have seen you running about the cliffs with Mabyn or romping with small children at home, and I see your face all light and laughter, and your tongue just a little too ready to say saucy things when an old foggy like myself would have liked you to take care; but here it is always the same face — sad, serious, and preoccupied. What were you thinking of when it was taken? I suppose some of your *protégés* in the village had got into mischief."

"Wenna, are you here?" said her

father, opening the door of her room. "Why didn't Mabyn tell me? And a nice thing you've let us in for, by getting young Annot to start that business of going to Devonport. He's gone to Tregear now."

"I know," Wenna said, calmly.

"You know? And don't you know what an inconvenience it will be to us; for of course your mother can't look after these things, and she'll expect me to go and buy poultry and eggs for her."

"Oh no," Wenna said, "all that is arranged. I settled it both with the Annots and the Tregear folks six weeks ago. We are to have whatever we want just as hitherto, and Hannabel Annot will take the rest."

"I want you to write some letters," said Mr. Rosewarne, disappointed of his grumble.

"Very well," said Wenna; and she rose and followed her father.

They were met in the passage by Mabyn.

"Where are you going, Wenna?"

"She is going to write some letters for me," said her father, impatient of interference. "Get out of the way, Mab."

"Have you read that letter, Wenna? No, you haven't. Why, father, don't you know she's got a letter from Mr. Roscorla, and you haven't given her time to read it? She must go back instantly. Your letters can wait — or I'll write them. Come along, Wenna."

Wenna laughed, and stood uncertain. Her father frowned at first, but thought better of what he was about to say, and only remarked as he shrugged his shoulders and passed on —

"Some day or other, my young lady, I shall have to cuff your ears. Your temper is getting to be just a little too much for me; and as for the man who may marry you, God help him!"

Mabyn carried her sister back in triumph to her own room, went inside with her, locked the door, and sat down by the window.

"I shall wait until you have finished," she said; and Wenna, who was a little surprised that Mabyn should have been so anxious about the reading of a letter from Mr. Roscorla, took out the document again, and opened it, and continued perusal.

"And now, Wenna," the letter ran, "I must finish; for there are two gentlemen coming to call on me directly. Somehow I feel as I felt on sending you the first letter I ever sent you — that I have

said nothing of what I should like to say. You might think me anxious, morbid, unreasonable if I told you all the things that have occupied my mind of late with regard to you; and yet sometimes a little restlessness creeps in that I can't quite get rid of. It is through no want of trust in you, my dear Wenna—I know your sincerity and high principle too well for that. To put the matter bluntly, I know you will keep faith with me; and that when I get back to England, in good luck or in ill luck, you will be there to meet me, and ready to share in whatever fate fortune may have brought us both. But sometimes, to tell you the truth, I begin to think of your isolated position; and of the possibility of your having doubts which you can't express to any one, and which I, being so far away from you, cannot attempt to remove. I know how the heart may be troubled in absence—mistaking its own sensations, and fancying that what is in reality a longing to see some one is the beginning of some vague dissatisfaction with the relations existing between you. Think of that, dear Wenna. If you are troubled or doubtful, put it down to the fact that I am not with you to give you courage and hope. A girl is indeed to be pitied at such a time: she hesitates to confess to herself that she has doubts; and she is ashamed to ask counsel from her relatives. Happily, however, you have multifarious duties which will in great measure keep you from brooding; and I hope you will remember your promise to give me a full, true, and particular account of all that is happening in Eglosilyan. You can't tell how interesting the merest trifles will be to me. They will help me to make pictures of you and all your surroundings; and already, at this great distance, I seem to feel the need of some such spur to the imagination. As I say, I cannot appeal to your portrait—there is no life in it; but there is life in my mental portrait of you—life and happiness, and even the sound of your laughing. Tell me all about Mabyn, who I think is rather jealous of me, of your mother and father, and Jennifer, and everybody. Have you any people staying at the inn yet; or only chance-comers. Have the Trelyons returned?—and has that wild schoolboy succeeded yet in riding his horse over a cliff?"

And so, with some few affectionate phrases, the letter ended.

"Well?" said Mabyn, coming back from the window.

"Yes, he is quite well," Wenna said, with her eyes grown distant, as though she were looking at some of the scenes he had been describing.

"I did not ask if he was well," Mabyn said. "I asked what you thought of the letter. Does he say anything about the borrowing of that money?"

"No, he does not."

"Very well, then," Mabyn said, sharply. "And you blame Mr. Trelyon for not telling you. Does a gentleman tell anybody when he lends money? No; but a gentleman might have told you that he had borrowed money from a friend of yours, who lent it because of you. But there's nothing of that in the letter—of course not—only appeals to high moral principles, I suppose, and a sort of going down on his knees to you that you mayn't withdraw from a bargain he swindled you into——"

"Mabyn, I won't hear another word! This is really most insolent. You may say of me what you please; but it is most cruel—it is most unworthy of you, Mabyn—to say such things of anyone who cannot defend himself. And I won't listen to them, Mabyn—let me say that once and for all."

"Very well, Wenna," the younger sister said, with two big tears rising to her eyes, as she rose and went to the door. "You can quarrel with me if you please—but I've told you the truth—and there's those who love you too well to see you made unhappy; but I suppose I am to say nothing more——"

And she went; and Wenna sat down by the window, thinking, with a sigh, that it seemed her fate to make everybody miserable. She sat there for a long time with the letter in her hand; and sometimes she looked at it; but did not care to read it over again. The knowledge that she had it was something of a relief; she would use it as a talisman to dispel doubts and cares when these came into her mind; but she would wait until the necessity arose. She had one long and argumentative letter to which she in secret resorted whenever she wished to have the assurance that her acceptance of Mr. Roscorla had been a right thing to do; here was a letter which would exorcise all anxious surmises as to the future which might creep in upon her during the wakeful hours of the night. She would put them both carefully into her drawer, even as she put a bit of camphor there to keep away moths.

So she rose, with saddened eyes and yet

with something of a lighter heart ; and in passing by the side-table she stopped — perhaps by inadvertence — to look at the basket of primroses which Harry Trelyon had sent her. She seemed surprised. Apparently missing something, she looked around and on the floor, to see that it had not fallen ; and then she said to herself, " I suppose Mabya has taken it for her hair."

From Fraser's Magazine.

CONTRASTS OF ANCIENT AND MODERN HISTORY.

III.

ONE who undertakes to contrast ancient and modern history seems bound not to omit such contrasts as may be observed between forms of government denominated alike, as between ancient and modern despotisms, ancient and modern oligarchies, ancient and modern democracies. A difficulty is here encountered from the insufficiency of nomenclature, and from the great diversity, alike in ancient and in modern times, between two forms of government which bear the same name. If we define despotism to mean the rule of one person, irresponsible to law, we see at once that the results of such a government change prodigiously with the same person, even over the same nation and in the same country. Over different nations also the result is different ; indeed in some the ruler is held in check by the popular spirit, however absolute he may be in legal theory. Imperial sway which is without constitutional check is naturally far more scrupulous and forbearing towards the ruling race, than towards subject races. A military oligarchy like that of the old Roman patricians differs naturally from the mercantile oligarchy of Venice : to explain the differences, we need not refer to ancient or modern world-wide tendencies. When we alight on two forms of government that can fairly be identified, the likeness of results so prevails that the differences are seldom to be called *contrasts*.

Despotism, or personal rule, can rarely continue good, except by careful *election* of the sovereign ; which election will generally be made, perhaps from the royal family, whether by the chief selecting his successor, or by a compact of the collective family, providing for its own stability ; or else by choice of the

nobles. The first method — in fact, *adoption* — gave to the Roman empire almost its only good emperors, never actual *sons* of the reigning emperors ; as Tiberius Cæsar, Trajan, and his three successors. The second has been practised by the Russian, and sometimes by the Austrian dynasty. The third was followed by the Tartars, when their empire was most powerful. But alike in ancient and modern times despotisms have been prone to decay, from the absence of ruling qualities in the ruler. Perhaps India was never better governed than under Acbar, and his immediate successors ; but we know that the general tendency of Indian despotism has been towards imbecile and fatuous princes. The degeneracy of the successors of the great Darius in ancient Persia is comparable to the degeneracy of the Ottoman dynasty, after it had received severe military checks. The decay of the Spanish monarchy and empire has a family likeness to the decay of the French monarchy, yet has its own peculiarity, religious bigotry being still more efficient in its ruin ; this bigotry may be treated as the modern contrast. But the fanaticism which was fatal to Spain and gravely damaged France, did not harm the Austrian dynasty so fundamentally, because the subject peoples were more successful in their insurrections, and the despotism never became complete.

Russia, perhaps, ought to be accepted as our modern type of personal rule. She is in truth by far the latest born. Her peoples are outside of Roman Christendom. Little or nothing in her institutions is traditional from the old world, or even from the middle ages. Her vigorous organization is of a date later than the birth of modern national science ; and out of her sagaciously importing every mechanical invention or adaptation of physics for imperial use, her rapid aggrandisement has sprung. In Russia we see not only an elaborate imperial organization, but a population ever increasing on a soil of vast extent and capable of infinite improvement. Probably never before did an imperial power rest on a nation of forty-five millions of homogeneous people as its nucleus. All the subject races increase steadily, and none are lost by emigration. The depression of the peasants is said to have been a bequest of the Tartars ; accustomed to their violent rule, despotism seemed to the people natural when they were expelled. Under different sovereigns the

dynasty has shown a different face. The tales of Ivan the Cruel are frightful; but it is little to the purpose to go back earlier than Peter the Great; indeed, we are chiefly concerned with this century. Even under the amiable Alexander I., whose talk and theory was that of a constitutional monarch, the eternal spying and terrible power of the fixed officials was a constant alarm to the aristocracy; but under the severe Nicolas,* who was for turning all into soldiers and making parade perpetual, the nobility and gentry had a truly painful time. No one seemed to breathe freely until the accession of Alexander II., and, alas! he instantly fell into deadly feud with Poland, and consummated the ruin of that unhappy nation. The religious persecution of the Poles under Nicolas was cruel, far beyond what might seem possible in the nineteenth century, and the rigorous punishment still inflicted on dissent from the Established Church, is the chief mark that Russia is far behind the age. The collision of ecclesiastical opinion between the Russian Church and the Church of the Cossacks may yet lead to convulsion; possibly may win religious freedom by the approved routine of martyrdoms. Yet it is rather to be hoped that the dynasty will learn wisdom from the experience of the rest of Europe, and by the influence of educated Russians. In other respects the rule is favourably contrasted with the known despotic empires of antiquity. The recent emancipation of the serfs, who were not cast out of relations to their masters to become landless proletarians, but received definite rights in the soil, is a solid guarantee of steady improvement. Each great government, under which the monarchy is organized, is destined to take a rank similar to the states of the American Union, with powers of local administration, as soon as a powerful and intelligent middle class is formed. At present, it seems, the dynasty is so much strengthened by its enfranchisement of the peasants, who have little political thought, that it can afford to despise the wishes of the nobility and gentry, to whom the administration by irresponsible, perhaps low-born, officials is necessarily offensive. The great Russian nation is as ambitious and as resolute to continue one and undivided as the French; indeed, the continuous plain from Berlin to the Ural Moun-

tains makes it a certainty of the future, that, come what may in political strife, European Russia will hold together as one. The great fact of modern times is *the increase and diffusion of knowledge*; nor can Russia be excluded from this, especially when the dynasty is so forward to promote geographical, chemical, astronomical, and geological science. The first curb on the caprices of personal rule comes from precedent and fixed procedures, which make experienced ministers and lawyers needful. Open law-courts and incorruptible judges are an immense second step. It is reported that in these matters Russia has much to improve and develop; but if one interpret her present government at the worst, it appears far preferable to any of the Mussulman governments whose tradition is from the middle ages, and to any of the great ancient empires known to us. The Russian power, on a greater scale, has something in common with that of Prussia, viz. the vigorous organization from which its eminence has arisen is strictly the work of the dynasty itself. In other cases, free towns and legally organized monarchies have wrought out a prosperity which despotism has turned to its own purposes, expended lavishly, and ultimately destroyed. In these two cases the dynasties themselves had an organizing and creative instinct which, in spite of wasteful ambition, studies on the whole the material welfare of the millions. The harshness of despotism is not likely to last long over a notoriously loyal people, nor will liberty, won by Russians for themselves, be withheld from Cossacks and other tribes ripe for the rule of law.

In some respects the despotic rule of England in India reminds one of the Roman empire; and it is natural to collate them, in a comparison of the ancient and the modern. Yet the comparison to the monarchy of Rome is unfair; for the British administration in India is not directed by a *personal rule*. The East India Company was an oligarchy of merchants, which could not control its own agents. It was itself soon overruled through the "Board of Control," which was subject to the successive Cabinets of England. To the Indians, no doubt, our administration and laws are despotic; but so they are, and have always been, to the peasants of England itself, who yet are not at all the more liable to the evils of a mere personal rule. The Indian administration is never, in its con-

* This emperor always signs himself Nicolas (good Greek) in our blue-books.

sciousness, irresponsible. It sees behind it the ministers of England, accustomed to dread national criticism, and anxious to make the despotism in India as little despotic as may be. Though on the whole the Indian Civil Service has its own way, the governor-general is sure to be imbued with purely English notions of rule. From this complication we have in India some developments of freedom which Russia would not endure; such as a newspaper press, free to criticise the acts of government; also free utterance at public meetings. This freedom was justified by Sir Charles Metcalfe as essential to our safety, because it warns us of native disaffection, and hinders secret conspiracy. So too we have a government budget, published for universal criticism. Law-courts are at least open, whatever their other weaknesses; nor does any one fear arrest on political grounds, short of offence which in England would make him amenable to the law. Further, the chief judges are not only appointed by England, but are irremovable by the governor-general and his council. Even where a political principle, as the freedom of the press, is concerned, their decisions cannot be reversed by the will of the government. It is to be lamented that the native princes have no refuge in our law-courts against purely political decisions, which may strip them of fortune, rank, and power; yet private citizens among the natives have long been accustomed, with full confidence of obtaining justice, to bring civil actions against the government in its own courts. All such things make our Indian empire unparalleled in form, equally as in circumstances.

Perhaps if we would ascertain what are the phenomena which will henceforth distinguish European despotisms from those of ancient times, we may find them in the counsel vainly urged upon the pope by the Emperor Napoleon III. for the improvement of his government in Italy. Of course he intended to recommend the continuance of personal rule, and had no thought of popular freedom; yet he especially urged publicity of law-courts, publication of government expenses and income, and (I think) security against arbitrary arrest. Prussia and Austria, both of which, until of late, we must decidedly class with despotic powers, have long yielded so much to publicity. Moreover, energetic rules have kept their armies subject to *civil* functionaries, so as to guard against the excesses of Prætori-

ans and Janizaries; nor were soldiers ever used, as in the scandalous Roman system, to execute violence without sentence of law. It must be expected that in the future all rule, even the most despotic, will be carried out by the instrumentality of a civil board; in short, monarchy will be a *bureaucracy*, and never will assume the high-handed form of military execution. Hereto must be added, that, more and more, as government becomes complex, and as miscellaneous science is called into its service, superior training and accomplishments are needed by a bureau, especially by all the heads of departments; which, in a widespread system, tends at once to bridle the caprices of personal rule and to infuse humane precautions.

So much as to modern *despotism*. As for ancient *constitutional* monarchy, perhaps we can only find it in the great kingdoms where *castes* were established, especially in Egypt. The Assyrian monarchy was probably at one time constitutional and sacerdotal: at least, its intimate union with religion suggests this; but, after it became an empire over men of foreign race, and rested on a large army, it is believed that the king felt no restraint on his general government. Egypt is known to us only in her decadence. She was already a wreck when the Greek Herodotus, father of history, visited her. Most of the accounts of her institutions are traditionary, nor can we wholly trust their echoes of the past. Unless machinery is seen at work, it is not possible to judge of its results accurately: just so, it is hard to judge of the operation of the Egyptian regimen from the dry statements of archæology. Still shorter glimpses of India come to us through the window which was opened for a moment between West and East by Alexander's expedition into the Punjab; yet its institutions were living when they were reported, and the reporters are intelligent Greeks, accustomed to political variety; not low-caste interpreters, or proud, but fallen priests, bent on enhancing the greatness of the past. Nevertheless, there are leading facts on which we can hardly be mistaken. In both countries a steady development of national wealth, superior art, intellect, and population took place, when nearly all Europe was in barbarism. Their arts and their literature, their laws and constitution were homesprung; and although, from knowing Egypt only since her political downfall, we are apt to think of her state

as implying total stagnation of mind, it is evident that such was not always the case. In spite of monstrously erratic religion, the system, taken as a whole, obtained for her people through a long succession of centuries so much of security and order as to allow of progressive cultivation of mind, and to generate a well-defined nationality.

The word *caste* is derived from the Portuguese *casta*, and signifies race. Since each caste ordinarily intermarries with its own members, the tendency of the institution is to generate as many races as there are castes, and thus to justify the appellation. The castes in Egypt are said to have derived their names from the occupations of their members, as agriculturists, herdsmen, fishermen, interpreters, warriors, &c. None of the details, if we could trust them, here concern us, but only the relation of the system to constitutional royalty.

Wherever wealth exists in superfluity sufficient to enable a chieftain to maintain an army — that is, in all the world, some dreary districts alone excepted — the first great political problem is, to secure that the chief who enforces the laws on others shall himself obey the law. The difficulty does not press much while anarchy is the chief danger, for to get one tyrant instead of a thousand is an admirable bargain; but when anarchy is past, when industry is steady and wealth increases, the powers of the prince and the dangers from him multiply still faster, if no special precautions have been taken. In an illiterate people, custom supplies the place of law, but without organizations to transmit and attest the customs, there is no fixedness. It cannot be doubted that every union of trades or professions defended their own customary rights, stood up with more or less boldness to support an injured member, and helped the executive government in punishing their members when disorderly and guilty. They were also an organ for collecting the taxes, and for publishing edicts of State. Out of special trades and occupations, as above said, rose actual castes, of which the most honoured in "the sacerdotal" kingdoms was that of *the learned*, who were all esteemed priests, science and religion being united. The most formidable order was the military, whose chief was the king. Every king of Egypt was adopted into the priestly order immediately on his accession. The priests had the high function of watching over and expounding the laws of the land, and included among

themselves judges, lawyers, councillors, secretaries, in short, all civil officials of high rank. To say that the priesthood held the supreme power, was *then* equivalent to saying that military force had become weaker than civil authority, and that the king himself was obedient to the law. It is even stated, that on the death of a king he could not be buried in the royal sepulchres without solemn sanction from the priesthood; so that by withholding the permission they might degrade one whose malversations they had failed to arrest. The fear of such a disgrace may have sensibly influenced the kings; indeed, it would seem that the royal power never became despotic and unconstitutional. A general equilibrium was sustained. The common people were undoubtedly very poor, as well as very industrious; but as the necessities of life were marvellously abundant, and the ease of feeding a family quite remarkable, while in such a climate men have few wants, all classes for many generations were contented with the national institutions. Such a nation does not criticise its laws and customs (*we* criticise them, from our very different point of view): and as long as it can escape hostile invasion and the exhaustion of war, it may flourish, in spite of very much which we regard as unjust, unkind, unwise, or despicable.

Our European monarchs in the middle age were restrained by proud armed barons, by many an insurrection, and occasional dethronements. This constant drawing of the sword to control princes was a less satisfactory method than the pressure of a national "priesthood," *i.e.* a civil bureaucracy which was fundamentally *independent of the king*. Here lies the point of contrast. After wealth began to accumulate all over Europe, and royal marriages aggrandized especially the House of Austria, and standing armies arose, the civil barriers were swept away by royal perjury and violence. In England, which, being an island, needed no great army of defence, and could not use an army for encroachment, the dynasty failed in its attempt to imitate foreign usurpation. We are proud of our representative government, as that which saved our freedom; but the Parliament did not succeed by mere civilization, they had to fight bloody battles for it. We cannot then boast, as apparently the Egyptians could, that their civil wisdom saved their institutions from their monarchs. It is apparent that the king

ought never to have been recognized as head, *both* of the military *and* of the civil government, an arrangement which makes it impossible to act legally against illegalities or treason of the king, or call him to account without arresting the whole administration. In consequence, we have had to reduce royalty to a state which makes it little else than an expensive and cumbrous ornament, not allowed to do us good, lest it do greater harm. The royal chief, alone in the realm, is not permitted even to tell the nation what is his opinion on any political question.

The representative or parliamentary system is regarded as the great peculiarity of modern times; and some have wondered that the ancients never alighted upon it, and never were aware of its importance. Guizot remarks, in his lectures on European civilization, that when Honorius and Theodosius the younger, joint sovereigns of Rome, wrote in the year 418 of the Christian era to the prefect of Gaul, ordering deputies of the province to attend every year in the city of Arles, the people refused the proffered boon, regarding it as an infliction. The Emperor Augustus was the first to allow the votes of every Italian municipality to be given on the spot, whereas formerly those who had the Roman franchise needed to travel to Rome if they desired to use their vote. This innovation might have led to new developments, for the Senate was understood to be elected by the Roman citizens, who elected the magistrates; and the senate consisted chiefly of ex-magistrates. But the first act of Tiberius was to extinguish the popular elections, which Augustus had anxiously made of less and less importance. In Greek history we read of various congresses, which might have been Parliaments; but all laboured under the same difficulty as the German Parliament of 1848. It was unarmed, while armed princes watched its proceedings. Our English boroughs in early days, thought it more of a burden than a privilege to send representatives to Parliament. A purely civil body can ill resist military and executive power; and although the English House of Commons was strengthened by the knights of the shires, who represented the smaller nobility, it would very rarely in those days venture direct opposition to any but a very weak and highly unpopular monarch. Henry VIII. was terrible even to his nobility, when they no longer brought armed retinues with them; though he had no standing army, and

often had barely a hundred soldiers at hand. When Charles I. endeavoured to arrest the five members, Parliament felt its danger very great, and interpreted the crisis as already civil war; though they needed to dissemble their perception of it until a Parliamentary army could be raised. So large a part of the richer classes were conscious of a separate interest from the nation, as to dread a really popular triumph over royal usurpation: hence the nation had to fight a very hard and doubtful battle, their leaders of nobler birth seldom being faithful. Dr. Arnold has said that if the profligate Buckingham had been a Marlborough—if, in consequence, the English arms on the continent had been brilliantly victorious instead of signally disgraced—it would have entailed ruin to the liberties of England. No unarmed Parliament can ever control an armed executive, except where it is notorious that a national uprising and the deposition of the prince will follow the attempt to violate the constitution. Two rebellions, of which the latter ejected the Stuart family forever, proved necessary in England. The Hungarians count twenty civil wars against their usurping kings of the House of Austria, who were armed from their other kingdoms. In Spain, in France, and everywhere on the Continent, the same tale is told, the same moral is learned. We may then cease to marvel at the stupidity of ancient nations, who could not expect a few hundreds of men in the garb of peace to act independently of a man who sat at their side, with 20,000 trained troops at his disposal. The movements of an energetic government are swift, and its preparations stealthy. Ancient nations were very slow in learning facts, being without our newspaper press and other publicity, or rapid transmission of letters. Thus, in short, the representative system, so valued by us, is not at all a main point of contrast between us and them. Many other material appliances, of which they were destitute, underlie its utility to us; and after all, we cannot claim for it truly, that it is a power to restrain the violence of the armed hand.

If, laying aside our patriotic self-admiration, we review as with the eyes of a foreigner the struggles between our barons and the kings, the civil wars concerning succession to the throne, the encroachment of the landlords (who were our warrior-caste) on the traditional permanence of the cultivators, and their

self-exemption by self-sanctioned laws from their hereditary State service, after the nation had won its battles against the dynasty; finally, when we consider our masses of pauperism, misery, and criminality, we shall perhaps speak in humbler tones of our political wisdom, and of its actual achievements. The king, whom the Egyptian civilians kept subject to the law, was not only head of the warrior-caste, but through many reigns chief of a great empire, extending on several sides beyond his native realm. One point of their regulation was like ours. The king's household was formed of noble persons, and he was daily waited on by gentlemen. But, perhaps, this is everywhere the case, except in usurped military rule.

It remains to contrast the *republics* of the ancient and the modern world. It is to be regretted that our acquaintance with ancient republics is so imperfect. We reckon them as Phœnician and Carthaginian, Greek, Etruscan, and Latin; for of Sicilian, Gaulish, Spanish, Celtiberian we know almost nothing; indeed, when we go beyond Rome and the chief Greek states, our knowledge is quite fragmentary. Yet some general facts are of interest. Intestine war was the habitual state of the Greek republics, which ordinarily coalesced under *leaderships*, but never under stable *federations*. The less known and smaller Italian republics had federations, — as the Latin, which at last fell into Rome, one and indivisible. The Etruscans appear to have been federated, though no central power was energetic enough, nor does any fixed centre appear; but Etruscans never appear at war with Etruscans. The Punic states in Africa had a few civil contests, but in general were free from such war; indeed, the great superiority of Carthage to every other, made her a fixed centre of inevitable attraction. They also had a federation consolidated under legal forms. Finally, their kinsmen in Phœnicia itself were in like case mutually independent, except so far as their federation joined them; but the union seems less close, except of three cities, called by the Greeks Tripolis. Perhaps all these ancient republics were originally monarchies, as, we know certainly, many of them were. Each separate state rested on a very narrow area, though the Punic colonies ranged far by sea, and spread wide on land among the Libyans. In general all ancient republics were chary of communicating the right of citizen-

ship, except while they were weak and very immature: none of them accounted birth on their soil to convey the franchise. Foreigners permanently resident often received a half-citizenship, coupled probably with the liability to serve in the national army. Rome, the greatest of these republics, became great by conquest only; her homogeneous primitive population occupied barely the small district called Latium; and as she expanded, she dealt out the rights of citizenship systematically, but warily. Under her sway the entire population was divided into Romans, Latins, Italians, foreigners, freedmen, and slaves; six classes, of which each had different rights. All Italians at last gained Roman rank, but only when the republic was about to perish. Many of these states (in fact, most of those best known to us) passed from a royal to an *aristocratic* regimen, and only in process of time became more democratic. The prevalent Greek routine was, for a demagogue to stand up against the aristocracy, and fraudulently make himself tyrant. By him the aristocracy were destroyed or exiled; then, on his overthrow, a democratic republic followed. In Greece the internal contests of rich and poor were bitter and unrelenting, as were the violences of the tyrants. In Rome the struggle against the patricians was lingering and painful, but by no means mutually atrocious in its earlier stages, in which the legal supremacy of democracy was won; only after Rome had become the victorious plunderer of the world, the battles between two sections of its aristocracy were ferocious and bloody. The demagogue Cæsar, who ended as a usurper, acted the part of the Greek *tyrannus* quite later in time and differently in circumstance. From his victories the republic had its death-blow. Carthage had two difficult struggles against the attempts of usurpers, but we do not know that either Etruscans or Phœnicians suffered any civil convulsions so terrible as Greece and Rome.

Against these ancient republics we have to set those of Italy, of Holland, of Switzerland, and of recent America. The Italian republics, except Venice, belong to the middle age, and greatly bear the traditional stamp of old Italy, in their better and worse features. That with powerful monarchs — their eternal enemies — watching them on every side, they should engage in mutual wars, and furious domestic factions, belongs to the

mournful infatuation of old Greeks. Venice was a most anomalous power, beginning with men who fled from tyranny almost into the sea, who in time grew wealthy and powerful by merchandise, until they formed a naval empire, over which a mere oligarchy reigned. Nothing so singular appears in antiquity, and we know not with what to compare it. To turn our eye to Holland is more to the purpose here.

Holland, like Venice, was largely won from the sea. Her industrious citizens elaborated early wealth and prosperity, which it was hard to defend from the attacks of neighbouring feudal counts. These claimed allegiance, not because their defence was needed, but because they were able to lay waste and rob. Thus it is uncertain how early we may call the towns republican. Falling under the House of Austria through the marriage of Mary of Burgundy, Holland was involved in the frightful struggle against the bigotry of Charles V. and his son Philip; and, after that lingering war was ended, had to encounter the attempts of France to subdue her. No republic of antiquity ever stood out against such unfair odds, and came out triumphant. The United Provinces do not seem to have found the problem of federation at all difficult. Strong common sense and desire of justice sufficed for their laws and administration, except so far as the fanaticism of creeds, which has poisoned the veins of all Romish Christendom except Hungary, occasionally led them astray. But on the whole they have avoided internal convulsions, even in the crisis at which they returned to monarchy. The maritime empire of Holland for a while made this small confederation rank with the greater European powers.

Switzerland appears to yet greater advantage, because it is easier to compare her with the ancient republics. Her early contest for freedom against the far greater power of Austria cannot but move admiration; her sagacious institutions and firm patriotism show her, to be worthy of the freedom which she won. Though the religious schism painfully and dangerously divided her, and two languages prevail as well as two religions, she has known how to meet the difficulties and do justice to all. Each canton has its own reasonable freedom, yet the federal power has the energy reserved to it which is needful to the protection of all, and needful also for its own permanence

against local wilfulness. Switzerland has undergone no such terrible religious struggle as the forty years' war of Holland, but having more of Catholicism left within her, she is more severely strained by the intrigues of the Papacy and the pressure of Catholic powers. Her excellent system of popular, not professional soldiery — which is only that of old England adapted to these times and perfected — gives her a force which the great military monarchies cannot but respect. In their wars she maintains her own neutrality with a strong hand, as we recently saw. So self-confident of strength is she, that she shelters political exiles from the bitter hatred of her mighty neighbours: no ancient power would thus run risks for a beaten party or a persecuted individual. Switzerland is sheltered by her mountains, but is also impoverished by them. The Alps, horrid with ice, with crags, and with torrents, were a disgust and terror to Romans, but the Swiss, like the Hollanders, have conquered the elements. The mountains of Greece were grand, yet do not compare with the Alps. When did the Greeks — or the Romans after the conquest of Greece — make such roads as Switzerland displays? What State of Greece or Italy ever made so just a distribution of the soil and timber for the benefit of the mass of the community, as is made in Switzerland? In this republic foreigners are pre-eminently welcome. When the neighbouring kingdoms harassed travellers for passports, Switzerland had no such jealousy. So poor a country, which has to be disproportionately armed and to sustain roads at great expense, cannot be eminent in art and science; nevertheless, she is in many ways eminent for a just and able policy.

But these elder republics are far eclipsed in magnitude by those of America, which are our best contrast to the ancients. Not that we can dwell on those which rose from the dependencies of Spain; for they inherited great weakness from Spanish ignorance and bigotry, and had, besides, a predominance of native American blood, with no previous culture from the past of Europe. Mexico and the South-American republics have had a sixty years' initiatory turmoil, which is comparable to that of early Attica or Etruria. Their institutions are scarcely adult, and we cannot yet judge of their fruits. But the North-American Union is far more mature. All its bases were firmly laid centuries ago, when the

states were English colonies. Our literature, our history, and our law have been their property also; and they have expanded into a first-rate power, which may multiply its population fourfold or tenfold without any need to alter its forms or its principles. To every republic in the world this is now the chief example: this therefore is the typical polity, which we ought chiefly to contrast with the ancient republics. Its enormous magnitude is the first great contrast. Aristotle did not believe that a free polity could subsist, with so many as a hundred thousand citizens — women and children of course he did not count. This republic has a population of nearly forty millions, and expects to double it before the century is ended. The Phœnician confederacy was larger than any Greek republic, but its area would only be a fraction of some single state of the American Union. The Roman republic, after the enfranchisement of the Italian municipalities, did but spread over the towns of Italy; — the country was prevalently a wilderness, over which a few slaves tended cattle; and a whole Italy is but small, placed on the breadth of the North-American continent. A hundred years ago any one who had asserted that so vast an area might be a free country under republican institutions, would have seemed to Edmund Burke a wild dreamer. A second wonderful contrast to antiquity is found in the thorough *miscellaneousness* of the democracy. Their greediness for citizens may seem to be a marvel. If a foreigner merely profess that he *intends* to become a citizen as soon as the law will allow him, he is instantly an object of interest and favour. Whatever his race or language — at least if he come from Europe — matters not: of late the Chinese have been ill-treated, because they work for less wages, and thus tend to depress native wages; but this is illegal violence, not approved law. When the slaves of African race were enfranchised, American principle was put to a severe trial. Should they accept these as their political equals? But it was felt that without their vote, the North had few loyal citizens in the South; and those loyal citizens declared that neither their fortunes nor their lives would be safe, unless protected by the negro vote. Moreover, it was felt unendurable by the republic to have in its heart a population of four millions disfranchised, which would prepare materials for all the disorders of old Europe. With a noble faith that adher-

ence to principle would justify itself, negro-suffrage was decided on by a vast majority.

The celebrated words of the original Declaration of Independence — that all men are naturally equal — was directed against the claims of royal descent and aristocratic blood. Of course it did not mean that all individuals have the same natural strength or the same natural talent, but that all must be treated as equal by the law. This sentence at once condemned a system of slavery, though slavery continued in spite of it. But the children of the men who upheld slavery will soon rejoice in its extinction. South Carolina, the state where slave-owners were most virulent, is now the state where the black race has earliest risen into high office. Prejudice has not yet died out, and more or less severe struggles remain; but sagacious liberality wins the day. Much inconvenience is endured by the immigration of Irishmen, illiterate and Catholic; but the republic educates their children, and in the next generation they display new and valuable qualities. Popular education is that on which the Union relies for hindering the blunders of democracy, for suppressing crimes, and moulding foreign immigrants into the type of American citizens. No sum seems to be grudged for education; and the totals expended on it are immense. Athens lavished public money on the dresses of tragic actors and dancers; the American Union spends not only to lay a foundation in reading, writing, and arithmetic, but to teach geography and political statistics, the powers of the States, and the rights and laws of the Union; that the citizens may know well about what they are voting. Zeal for education pervades also the negro race. When General Sherman made his famous march through Georgia, and reached South Carolina, he had not been many hours in Charleston before the negroes held a public meeting, the leaders being men who had bought their freedom from their masters, — a meeting for what object? To establish schools for instructing the coloured people: and for this purpose a considerable sum was subscribed on the spot. New York, the state to which Irish emigration is chiefly directed, is dissatisfied to find so many citizens remaining uninstructed, in spite of the munificently provided free schools; it has, in consequence, just passed a law (June) for *compulsory* education. Whether it will be possible to execute it against

the influence of the Catholic clergy, is a question of much interest which time will soon answer; but the law itself displays the resolute policy which New York holds in common with the rest that were lately called the "free" states. Until public education is given to all the negroes and to the poor whites of the South, the North feels that the republic is not safe, nor can its institutions produce their right fruit. No democratic republic of antiquity had a particle of zeal for the education of poor citizens. It cannot be doubted that the all-pervading contrast between the future and the past will lie in *Publicity*, in active *Public Opinion*, and in *Public Education* to make it intelligent.

Another eminent peculiarity of this great republic is seen in its treatment of public land. On this very matter a great scandal rests on the old Roman patricians — as, indeed, on the English barons and their successors, — for their conversion of public land held conditionally into private land held unconditionally, and then claiming to eject tenants. Rome, in the fulness of her power, holding vast and valuable tracts of public land, was satisfied to leave them to slaves and cattle, as do Scottish highland lairds. But the American Union desires nothing so much as to people the wastes with independent cultivators, accounting that the strength of a nation lies in the number of its stout-hearted rustics. The first step was to discard the English system of making large grants of land to favourites, and to sell all at a very moderate fixed price, yet taxing it by an acreage so as to secure that it should be bought for immediate cultivation, not as a mere speculation for the future. The second great step was the Homestead Law, passed as soon as the secession of the South made Northern votes supreme in the Congress. By this law any citizen or any immigrant receives 160 acres of cultivable land for the mere office fees, on undertaking to cultivate it in a limited time. In order to encourage railways, an indiscreet quantity of public land on each side of a rail has been voted to them. This (it is beginning to be felt) was overdone; but as the railways cannot serve their own interests better than by putting cultivators on it, and cannot screw up prices while so much public land is free, the general aim of the policy will perhaps be attained. Still wiser, in the opinion of some, it would have been, not wholly to alienate the land from the State, but to

sell it for a hundred years, conceding to the tenants all buildings and fixtures as their own. But to us here the notable thing is, that the republic holds as a fixed policy to shun pauperism, proletarians, dependent cultivators, and town-rabble, equally as serfs or slaves. The Roman aristocrats scorned and despised town-rabble, — "the dregs of Romulus" — but never had the heart to plant them out into the country, as freeholders, on the public land; nay, a mob of senators, with clubs made from the broken benches, murdered Tiberius Gracchus for proposing it. They had, in fact, the hearts of slave-owners, as slave-owners in general they were.

But the land-system suggests to contrast the army-system, which closely touches the other. The Romans did sometimes plant colonies, Latin or even Roman; but the consul's sergeant, year by year, picked off all the strong youths for the army, so that when the era of conquest was begun, the demand for soldiers emptied the country. Under the merciless conscription the rustic Romans and Italians perished on every shore of the Mediterranean, and their place was filled by slaves who could not be seized for the army. Freed men and needy citizens flocked into the chief towns, which swelled continually in population. But the army could not be fed by volunteers; the discipline was too merciless; rigorous conscription continued even after the democracy was stronger. On the contrary, the great modern republic has employed conscription only in her severest strain, and then most reluctantly. In general there has been no compulsory service, and so small a Federal army that it may be called a mere nucleus of officers, and a skeleton. Each State has had its separate trained bands of volunteers, whose services cannot be commanded by the President; thus there is no danger of his using national troops for the purpose of usurpation. As to exhausting the military population, the terrible slaughter of the late civil war was more than retrieved by the natural increase. Another such war, so wasteful of life, there is no present reason to apprehend.

Again, in the treatment of conquered rebels, the modern State shows a wonderful contrast to ancient, and even to all European powers. The Athenians, when the revolt of Mitylene had been suppressed, were persuaded by the impetuous demagogue Cleon to account the

whole State guilty and command the military execution of the entire people, including the democratic friends of Athens. Having slept off their rage, they repented, and with difficulty rescinded the blunder; yet a thousand Mitylenæans of the opposite party were slain in cold blood, and this in comparison seemed merciful. The Latin colony of Fregellæ had been foremost in brave resolve against Hannibal; and, proud of its fame and loyalty to Rome, indulged in free and spirited complaint on some minor matters. Words were retaliated by deeds of war: the consul Opimius, accounting them treasonable, summarily destroyed both the citizens and the town, and is extolled for it by Cicero as patriotic. Put in contrast the dealings of the American Union with her rebels, who, solely because they were outvoted, had broken oaths of office and oaths of Congress, and had used their official powers under the republic to make war on the State to which they had sworn allegiance. After victory no one was punished. General Lee, the worst antagonist, received sympathy and almost honour. Jefferson Davis, president of the rebels, responsible for most cruel treatment of the Northern prisoners, after short detention was contemptuously set at large. Nor is this attributable to the spirit of the nineteenth century. Russia sends her Polish nobility, captured in an honourable national war, to work as criminals in the Ural mines, or in Siberia. Austria hanged the Hungarian generals, who, one after another, had surrendered to Russia, enticed by honourable reception. In the Indian rebellion, an English officer alured two sons of the king of Delhi by fair words to surrender themselves, and presently shot both with his own hand, lest they should be recaptured by the people. He received no censure from our authorities. Nay, the humane Lord Canning sent their aged father, the Great Mogul — under whom, as *suzerain*, the East India Company held legitimate authority to collect Indian taxes — to labour in the garb of a felon, among felons, in the Andaman Islands; and when the last spirited Indian leader, Tantia Topee, was yielded to our demand from a neighbouring state, he was instantly hanged, though the war and the danger were past. No remonstrance or reproof for any of these deeds came from our Parliament. Hence the widely different conduct of the American Union is imputable solely to the sympathy of this democracy with

human weakness. Though smarting under bloodshed, taxes, and debt, they were ambitious to show to the world that in abhorring tyranny they will not be tyrants themselves. This is a very new form of ambition, and one of excellent omen.

Something also is imputable to the magnitude of the republic, to its proud sense of stability, and to its wise coveting of the affections of the Southern whites. A little State of antiquity might so easily be revolutionized, whatever the form of government, that it was prone to an intense jealousy; which made tyrannies and aristocracies more cruel, democracies more furious. But in a vast community the mass cannot be overawed by force, all changes of opinion are the work of time, no formidable preparation of military power can be secret. Great moral results flow out of this magnitude of territory, with a seacoast on opposite oceans. In no war but a necessary war of justice can California and Georgia, Ohio, Pennsylvania, and Massachusetts have common interest and sympathy; hence, so long as all the States have full proportionate power over the national policy, the more widely the republic spreads, so much the stronger is our guarantee of its peacefulness. That, like the English in India, it has an "earth-hungering," cannot be denied: indeed, the recent purchase of Russian America remarkably attests it. Perhaps they were glad to shut out Russia from any future claims on their continent; or perhaps they thought that it would conduce to an ultimate coalition of the British possessions on the Pacific with their Union. A willing annexation would gratify them; but they desire hearty fellow-citizens, not reluctant subjects. In the long run, amalgamation is the winning principle, when neighbour States talk the same language, and have the same political sentiments; for when an organization is so flexible and so just that local liberty is not lost in becoming members of a larger community, all feel that their grandeur, their safety, and their comfort are promoted by fusion. A central power which represents them to the outer world, protects them the better, the mightier it is; and, at the same time, the more effectively does it guarantee them from civil war, and constrain each separate State to legality. Moreover, each man is in sentiment a citizen of the Union, and not of one State only. Internal custom-houses are forbidden by the constitution: goods,

as well as persons, have perfectly free transit. Wherever a citizen travels he feels himself always with his own people, as much as we do whether in Cornwall or in Yorkshire: thus for a *homogeneous* population, however large, the problem of *federative* republicanism is now solved, provided that the people have a free active spirit and habits of political organization. Indeed, it is wonderful with how little disturbance heterogeneous and refractory elements are digested and assimilated in this political chemistry. Germans, Dutch, Norwegians, of foreign tongue, Irish Roman Catholics with very un congenial sentiment — immigrants, however inconvenient temporarily — are soon moulded into as much of congeniality as is needed for democratic fellowship. No shock is endured by the nation as a whole, which is able to take in the material strength of the new comers without risking an upturn of institutions. Most probably then, in the future, the Dominion of Canada and the great republic are destined to coalesce for mutual benefit. At present the honour of England and the high republican taxes occasioned by the war-debt forbid the thought; but neither obstacle will last very long.

If now we ask what has conferred on the great republic institutions so successful, the reply is on the surface: it is, because, reversing English practice, she has studied to do *everything on principle, nothing by compromise* — nothing by inconsistent regulation, by half-measures, or by temporary expedient, which shall ensure after-quarrel or need successive patchings. The only exception was in the matter of slavery; there, in English fashion, dissimulation and compromise were used, with a truly frightful punishment. With a generous confidence in broad principles, laws are enacted which, if at the moment inconvenient, are sure in the long run to conduce to justice and contentment. The regulations of all the franchises are self-acting, so that if population in different parts expand unequally, no injustice shall arise to the more populous, and no need of acts to amend acts. Looking on jurisprudence as a science, they have sought to give to its practice the breadth and stability of science; believing that when men are unripe for public duty and honour, to call them to duty and honour is the way to ripen them. They cast on the State itself, as a parent, the task of educating its citizens; and to stingy or timid rich men they say, "Educate the poor well, lest they be dangerous

to you." England has feebly entered this course: Prussia and America lead the van of the movement. Probably it is the great distinction of the modern world, our chief contrast to antiquity.

FRANCIS W. NEWMAN.

From Blackwood's Magazine.

THE STORY OF VALENTINE; AND HIS BROTHER.

CHAPTER XXXIV.

ONE nail strikes out another, the Italians say. It was not wonderful that Richard Ross should feel this, seeing that the subject which concerned his own individual life most closely was that which drove out of his mind all immediate recollection of the other which was the object of his journey. But that the strange and startling apparition of the new figure which suddenly confronted her should have driven the recollection of Valentine out of Lady Eskside's head, was much more wonderful — for her heart was rent with anxiety about Val; whereas Richard was only vaguely, lightly affected by that anxiety; and there was no such magic of old associations, old passions, curiosity, and that baffled sense of impotence which provokes the mind to put forth its whole powers, in her mind as in his. But for the moment Lady Eskside forgot her beloved boy, and her devouring anxiety; forgot everything but the shock and startling sensation produced upon her by this face, which suddenly looked at her, meeting her gaze calmly, unaware of its own power. When she brought Dick Brown to a stop in his explanations by her eager, almost wild question "Who are you?" the subject which up to that moment had been engrossing her whole mind departed wholly out of it. Poor Val, lying upon his mother's bed! He was wronged even by those who loved him best — he was forgotten, if only for a moment, in the strain and stress of affairs more urgent; but happily did not know it. Dick was very much embarrassed, good fellow, to find himself suddenly elevated into a place of such importance, and to be asked so passionately, so urgently, who he was. Nothing in the world more easy than to give an account of himself. He smiled involuntarily, at the anxiety in Lady Eskside's face.

"It is very easy to tell you that, ma'am," he said. "I didn't send my

name thinking you wouldn't know. I'm Richard Brown, head man now at Mr. Stylist's, the boat-builder at Oxford, and for three years at Goodman's, at Eton. That is all about me."

"What is it?" said the old lady. "No, I am not deaf—you need not speak loud; but say it again. Richard? Yes, yes. Of course it could be nothing but Richard. And you came to tell me that? Is your mother living? is she still living? and where is she? Was it she that sent you here?"

"I came to tell you about Mr. Ross—"

"Boy," said Lady Eskside, "don't trifle with me. This was what drove my darling away. Is the woman living, and do you know where she is? Your face tells a great deal," she went on, "but not all. Where is your mother? Did she send you? Is she near? Oh, for God's sake, if you have any pity, tell me! What with one trouble and another, I am near at an end of my strength."

"Mr. Ross is ill, ma'am," said Dick, much bewildered, but holding fast to his mother's *consigne*, not to say anything about her. "He is lying ill at our—at my house."

"What could he be but ill," cried the old lady, drying her eyes, "after all that has come and gone? But don't think that I'll let you go now. Richard, perhaps you are ignorant, perhaps you don't know how important it is—but oh, for God's sake, tell me! Have you got her? have you got her safe this time? Come near to me; you have a kindly face," my lady went on, looking closely at him with the tears in her eyes. "A face I knew as well as I know myself; but kind and young, like what he was before the world touched him. Sit down here; and oh, my bonnie man, have confidence in me!"

She laid her delicate old hand upon his arm, she bent towards him, her face all tremulous with emotion, tears in her eyes, her lips quivering, her voice pathetic and tender as the cooing of a dove. Dick looked at her in return with respectful sympathy, with natural kindness, but with a half-smile of wonder. What was it she wanted of him? What could he respond to such an appeal?

"I don't know, ma'am, what I can do for you, what I can tell you," he said; "I'm but a working man, not educated to speak of. There is nothing particular about me that I should confide in any one; but if you tell me what it is you want, I've nothing to conceal neither,"

the young man said with gentle pride, so innocent and honest that it made his smile all the brighter. "You are welcome, ma'am, if you care for it, to know everything about me."

"I do care for it," she said, keeping her hand upon his arm. She had made him sit beside her on the little sofa, and her eyes were so intent upon his face, that he scarcely knew how to sustain the gaze. He paused a little to think what he could say first.

"I don't know what to tell you, ma'am," he said, with a laugh; "it's all in what I've said already. Except about Mr. Ross—perhaps that is what you mean; I can't say, and you can't think, what he's done for me—how good he's been. My life is more a story about him than anything about me," said Dick, with a generous glow coming over his face, "since the day I first met him on the river—"

"That was—how long ago?"

"He wasn't in the boats till the year after," said Dick, availing himself of the easiest mode of calculating. "It's about seven years since—we were both boys, so to speak. He took to me somehow, ma'am—out of his own head—by chance—as some folks says—"

Under other circumstances no story could have been so interesting to Lady Eskside, but at present her mind was too much disturbed to follow it. She interrupted him hastily—"And your mother! what of her? You tell me nothing about her! Was she there as well as you?"

Dick felt as it is natural to feel when you are interrupted in a congenial story—and that your own story, the most interesting of all narratives. He repeated—"My mother!" in a tone of disappointment. How his mother could be more interesting to any one than Mr. Ross and himself, and that tale of their meeting, which he had already told successfully more than once, Dick did not know.

"Yes, your mother! Tell me her name, and how she brought you up, and where she is living!—for she is living, you said? Tell me! and after that," said Lady Eskside, in an unconsciously insinuating tone, "I shall be able to listen to you about my poor Val, and all that you have had to do with him. Ah! be sure that is what I would like best! but the other, the other is more important. Where is she? What does she call herself? How did she bring you up? Oh!

don't lose time, my good boy, but tell me this, for I must know."

Dick became much confused and disturbed, remembering his mother's caution to him not to mention her. He could not understand why she should thus be dragged into the question. But she had evidently expected it, which was very perplexing to him. He faltered a little in his reply.

"My mother—is just my mother, ma'am. She lives with me; she's nursing Mr. Ross now."

The old lady gave a cry, and grasped him by the arm. "Has she told him?" she cried. "Does Val know?"

"Know what?" said Dick in amaze. She gazed at him intently for a moment, and then all at once fell a-crying and wringing her hands.

"Is my boy ill?" she said. "What is the matter with him? how soon can we go to him? Will you take me there, Richard, as quick as we can go? Your mother is nursing him, you are sure? and you don't know anything she could have told him? Oh, let us go! there is not a moment to lose."

She got up hastily to ring the bell, then sat down again. "There will be no train—no train till to-night or to-morrow; oh, these trains, that have always to be waited for! In old days you could start in your post-chaise without waiting a minute. And, poor lad, you will want a rest," she added, turning to look at him, "and food. Oh, but if you knew the fever in my mind till I am there!"

"Don't be too anxious," said Dick, compassionately, understanding this better; "the crisis cannot come for four days yet, and the doctor says my mother is an excellent nurse, and that he'll pull through."

Lady Eskside rose again in her restlessness and rang the bell. "Bring something for this gentleman to eat," she said, when Harding appeared; "bring a tray to the dining-room; and get me the paper about the trains; and let none of the other fools of men come about me to stare and stare," she cried fretfully. "Serve us yourself. And bid your wife come here—I have something to say to her."

"To the dining-room, my lady?"

"Didn't I say here!" cried Lady Eskside. "You're all alike, never understanding. Send Margret here."

Mrs. Harding must have been very close behind, for she followed almost instantly. She gave a little cry at sight

of Dick. I fear this was not so independent a judgment as Lady Eskside supposed, for of course her husband had suggested the resemblance she was called upon to remark; but she had no unbounded confidence in her husband's judgment, and she was upon the whole as likely as not to have declared against him. Lady Eskside turned sharply round upon her. "What are you crying out about, Margret? I expected a woman like you to have more sense. What I wanted to tell you was, that I am going away for a day or two. Well; why are you staring at a stranger so?"

"Oh, my lady!" cried Mrs. Harding, "it's no possible but what you see—"

"Ay, ay—I see, I see," cried Lady Eskside, moved to tears; "well I see; and if it please God," she added devoutly, "I almost think the long trouble's over. Margret, you'll not say anything; but I have no doubt you know what it has been this many a year."

"Oh, my lady! yes, my lady! How could I be in the house and not know?"

"It is just like you all!" cried Lady Eskside, with another sudden change of sentiment; "prying into other folk's business, instead of being attentive to your own; just like you all! But keep your man quiet, Margret Harding, and hold your tongue yourself. That's what I think," she went on softly, "but nothing's clear."

Dick sat and listened to all this, wondering. He thought she was a very strange old lady to change her tone and manners so often; but there was enough of sympathetic feeling in him to show that, though he could not tell how she was moved, she was much moved and excited. He was sorry for her. She had so kind a look that it went to his heart. Was it all for Val's sake? and what did she mean about his mother? Somehow he could not connect his own old suspicions as to who his father was with this altogether new acquaintance. He got confused, and felt all power to think abandoning him. In everything she said, it was his mother who seemed to have the first place; and Dick felt that he knew all about his mother, though his father was a mystery to him. Of what importance could she be—a tramp, a vagrant, a woman whom he himself had only been able to withdraw from the fields and roads with difficulty—what could she be to this stately old lady? Dick, for his part, was deeply confounded, and did not know what to think.

She came up to him with a tremulous smile when the housekeeper went away. "Richard," she said, speaking to him as if (he thought) she had known him all his life — "if I am right in what I think, you and I will be great friends some day. Was it you that my boy wrote about, that he was fond of when he was at Eton — oh, how blind I have been! — that had a mother you were very good to? My man, was that you?"

"Yes, ma'am — my lady — I suppose it was me —"

"That worked so well, and raised yourself in the world? that he was going to see always, till some fool, some meddling fool that knew no better," cried Lady Eskside, "wrote to my old lord to stop it? But I thank God I did not stop it!" said my lady, the tears running down her cheeks. "I thank the Lord I had confidence in my boy! Richard! it was you that all this happened about? You are sure it was you?"

"There could not be two of us," he said, his face lighted up with feeling; for Dick, good fellow, though he did not know why she was crying, felt something rise in his throat at the sight of the old lady's tears. "Yes, ma'am — I mean my lady."

"Don't call me my lady, my bonnie man; call me — but never mind — we'll wait a while; we'll do nothing rash," cried Lady Eskside. "You're hungry and tired all this time, while I've been thinking of myself and of Val, and not of you. Come and have something to eat, Richard; and then you'll take me to my boy."

But Lady Eskside was two or three years over seventy. She was worn out with anxiety, and now with the sudden excitement of this visitor. She had taken neither food nor sleep as became her years since Val had disappeared; and before her preparations could be made, she herself allowed that to attempt to travel by the night train would be foolish and unavailing. "I don't want to die before it's all settled," she said, smiling and crying. "We'll have to wait till to-morrow." And Dick, who had travelled all night, was very willing to wait. She sat by him and talked to him while he had his meal, and for an hour or more after; and though Dick was not stupid, he was a child in the hands of the clever old lady, who recovered all her spirit now that her anxiety was removed, and this wonderful power of setting everything right was put into her hands. Lady Eskside was but human, and, so far as she

was aware, no one but herself had the faintest inkling of this blessed way of clearing up the troubles of the family, or knew anything of Dick Brown and his mother. She felt that she had found it out, that it would be her part to clear it all up, and the thought was sweet to her. And as for her anxiety, Dick made so light of Valentine's illness, which did not now alarm himself, that he made Lady Eskside rather happy than otherwise by his account, supplying her with a reason for Val's silence without communicating any alarm to her mind. Very soon she knew everything about Dick, — more than he knew himself — his tramp-life, his wanderings with his mother, his longings for something better, for a home and settled dwelling-place. And Dick, without knowing, made such a picture of his mother as touched the old lady's heart. "She used to sit at the window and watch for the boat. That was the first thing that reconciled her a bit," said Dick. "She used to watch and watch for Mr. Ross's boat, and sit like a statue when we'd started him, to see him come back. She always took a deal of interest in Mr. Ross."

"Did she ever tell you why?"

"Because he was so kind," said Dick. "I've thought often there was more in it than that; but what could a fellow say to his mother, ma'am? I wasn't one to worry her with questions. That's how she used to sit watching. Mother is strange often; but there never was any harm in her," said Dick, fervently — "never! The others would hold their tongues when she was by — I've thought of it often since; and when she saw my heart was set on settling down, she gave into it, all on my account. That is what I call a good woman," he cried, encouraged by the attention and sympathy with which his story was received. Lady Eskside learnt more in an hour or two of the woman who had cost her so dear, than she could have done otherwise in years. She found out everything about her. She even got to feel for and pity the mother — ignorant, foolish, unwitting what harm she was doing — who thus kept to her savage point of honour, and never betrayed herself nor claimed her son. Dick, unconscious, told everything. It was only on thinking it over after that he remembered again his mother's charge not to say anything of her. "Say only it's your mother." Well! he said to himself, he had said no more. It was as his mother that he had spoken of her, and

as that alone. He knew her in no other character. He had spoken of her life, her habits, her goodness; but he had told nothing more. There was not, indeed, anything more to tell, had he wished to betray her.

In the afternoon, Lady Eskside was persuaded to go and rest—a repose which she wanted mightily—and Dick was left alone. It was then that he began to think that possibly he had been indiscreet in his revelations; and he was somewhat frightened, to tell the truth, when he found himself left in the great drawing-room alone. He did not know whether it would be right for him to wait there, where Lady Eskside left him, until she came back. He felt a little doubtful whether he might examine the great cabinet, and all the curious things he saw, and which fired him with interest. He could not do them any harm, at last he reflected; and he did not think the kind old lady would object. So he got out his note-book, and made little drawings of various things that struck his fancy. The wonder being over for the moment, and the pressure of Lady Eskside's questions, Dick's mind gladly retired from it altogether, and returned to easier everyday matters. That this discovery, whatever it was, should make any difference in his life, did not seem to him at all a likely idea; nor did such a notion seriously enter his mind. And no thought of the possible transference of his own lowly and active life to such surroundings as those which were now about him, ever occurred to Dick. He would have been extremely amused by the idea. But he made a note in his book—a rough little drawing, yet quite enough to be a guide to him—of sundry little “details”—arrangements of brackets and shelves, which he thought might be adapted even to his little place on a small scale. He had his eyes always about him, ready to note anything of the kind; and though he smiled to himself at the idea of copying in his tiny parlour what he saw in this great room, yet he made his drawings all the same, with his rough workman's pencil. The drawings were very rough, but he knew how to work from them, and in his mind's eye already saw a homely imitation of the objects he admired figuring upon his low walls. He even thought it would amuse Val, when he got better, to see in the boatman's parlour a humble copy of the brackets in Rossraig.

And after this, as one of the windows was open, he strayed out, with some per-

turbation lest he should be taking too much upon him, and wandered through the shrubberies, and out into the woods. It was a soft spring afternoon, the sun getting near his setting, the trees showing a faint greenness, the sound of the Esk filling the air. The river was full and strong, swelled by the spring rains, and by the melting of all the early frosts. It made a continuous murmur, filling the whole soft universe around with an all-pervading sound. Dick had almost forgotten what the woods were like in the early spring; and the charm of the stillness and the woodland rustle, the slanting lines of light, the bright gleams of green, the tender depths of shadow, stole into his heart. He had a still, profound, undemonstrative enjoyment of nature, loving her without being able to put his love into words; and the beauty of those irregular banks, all broken with light and shade, topped with trees which threw up their tall stems towards the sky, waiting till the blessing of new life should come upon them—delighted the young man, who for years had known no finer scenery than the unexciting precincts of the Thames. Dear Thames, kind river, forgive the words!—ungrateful words to come from the lips of one who owes thee untold pleasures; but soft meadows and weeping willows, and all the gentle lights and shadows of the level stream, looked tame beside the foaming, tumbling river, rushing with shouts among its rocks, singing over its pebbles, leaping and hurrying onward through all those bold braes that hemmed it in, and played perpetual chase and escape with the brown torrent. The trees on Eskside were not the grand broad placid trees to which Dick was used. Red firs, with the sun on their great russet pillars; white birches, poisoning daintily on every fairy knowe; pale ash-trees, long-limbed and bare—mixed with the oaks and beeches, and gave a different character to the scene; and here and there a bold bit of brown rock, a slip of red earth, the stony course of a burn which went rattling in hot haste to join the Esk, crossing the path and toppling down in dozens of tiny waterfalls—all these were like nothing he had ever seen before. He strayed on a little further and a little further, by bypaths of which Val knew every curve and corner, under trees, every one of which, could they have spoken, would have asked for news of their young lord. Sometimes it occurred to him, with a sense of additional pleasure,

that all this would one day belong to his young patron. Would Val ever ask him to come here, he wondered? then "Lord bless me!" said Dick to himself, "why should he? He'll always be kind and good as long as he lives; but why should he ask the like of me?" and he laughed at his own absurdity. But what with these thoughts, and what with no thought at all, mere pleasure, which perhaps carries farthest, he went on, much farther than he knew, as far as the linn and the two great beeches which had played so great a part in Val's life. Just before he reached that point he was stopped by a sudden sound which startled him, which had a distinct tone of humanity in it, and did not spring from the fresh and free nature about. It was the sound of a sob. Dick stood still and looked about him, with recollections of his own childhood rising fresh into his mind, and a tender thought of finding some poor little tired wanderer under some tree, crying for weariness. But he could see nothing, and presently went on again, persuading himself that his ears must have deceived him. He went on, himself rousing intermittent echoes, for his step was sometimes inaudible on the mossy turf, and sometimes sent thrills of sound all through the wood, as his foot crashed on a fallen branch, or struck the pebbles aside in a little shower.

When he got to the linn he paused some time on the edge of the river, struck by the beauty of the place; and only when he was passing on, perceived behind him, all at once, somebody sitting at the foot of one of the trees — a little figure muffled in a blue cloak, and leaning against the bole of one of the big beeches. Dick made an unconscious exclamation — "I beg your pardon" — and went on, half frightened lest he should have disturbed some one who had a better right to be there than he had. But this incident broke the spell of his wandering, and recalled him to the thought that he was far from Rosscraig, and that it would be safer to turn back as he had come, than to risk losing his way. Perhaps a little curiosity about the solitary figure under the tree had something to do with this prudent thought; but his curiosity was lessened by a second glance he had stolen through the trees, which showed him that it was a lady who sat there. Had it been a tramp-woman, Dick might have shown his sympathy; but with a lady, even one

in trouble, he could only intrude; and yet he could not help being interested. Could it be from her that the sob had come? and why should she be crying here, all alone, like an enchanted princess? He knew little about enchanted princesses, but he had a tender heart, and the sob had troubled him. He went back again, passing slowly, trying to make out, without staring — which was not consistent with Dick's idea of "manners" — who it was, and what she was doing under the shadow of the tree. The soft grass glade between these two giants of the wood was lighted up by a slant ray of the sun which slid all the way down the high bank on the other side of Esk, to pour that oblique line of glory under the great sweeping boughs over the greensward. She was seated out of the sunshine, but with her face turned towards the light, and it seemed to Dick that it was a face he had seen before. "I do not think the fact that it was a young face, and a fair one, touched him so much as that it was very pale and mournful, justifying his idea that the sob must somehow have belonged to it. How he would have liked to linger, to ask what was the matter! He would have done so, had she not been a lady; but Dick knew his place. His surprise was great, however, when, as soon as his back was turned, he heard a stir, a sound of footsteps, a faint call, which seemed addressed to him. He turned round quickly. The girl, whoever she was, had risen from her seat. She had come out of the shade into the sunshine, and was standing between the trees, with the light upon her, catching a glittering edge of hair, and giving a hem of brightness to one side of her figure, and to the outlines of the blue cloak. "I beg your pardon; did you call me?" said Dick, shy but eager. Perhaps she had lost her way. Perhaps she wanted help of one kind or another. Then the little woodland lady beckoned to him timidly. I think, if it had not been for the anxiety and longing that swelled her heart well-nigh to bursting, that Violet would never have had the courage thus to appeal to a stranger in the wood.

CHAPTER XXXV.

SHE advanced a step to meet him, timid, yet with that confidence which social superiority gives: for Dick, I am bound to confess, though I love him, was not one of those wonderful beings who bear the exterior of a fine gentleman

even in a workman's clothes. He was not vulgar in any respect, being perfectly free from every kind of pretension, and with all the essence of fine manners—that politeness of the heart which neither birth nor education by themselves can give; but though, as I have said, his dress was to a certain degree copied from Valentine's who possessed the *je ne sais quoi* in perfection, and was quite well-made and unobtrusive, yet I am obliged to allow that Dick had not that mysterious something which makes a gentleman. You could have found no fault with his appearance, and to look at his candid countenance was to trust him; but yet he had not the *je ne sais quoi*, and Violet knew that, conventionally speaking, she was addressing one who was “not a gentleman;” this fact gave her a degree of freedom in calling him which she would scarcely have felt with a stranger of her own class. But more than that, Violet had recognized Dick. It was some years since she had seen him, but she remembered him. Not all at once, it is true. When he appeared first, before he saw her, she had felt as he did, that she had seen his face before; but ere he passed again, she had made out where and how it was that she had seen him. It must be recollected, too, that Violet's heart was full to overflowing with thoughts of Val, of whom this stranger, so suddenly and strangely appearing, was a kind of shadow in her mind. The whole scene came before her as by a flash of light, after five minutes' pondering within herself where she had seen that face before—for from the first glance she had felt that it was somehow associated with Valentine. What could bring him here, this boatman from the Thames? Her heart was breaking for news of her young lover, so dismally parted from her, whom she must never see again (she thought); but only to hear his name, to know where he was, would be something. She would not have betrayed herself to “a gentleman,” one of Val's friends and equals; but of “Mr. Brown”—she remembered even his name by good fortune—she might make her inquiries freely. So, urged by the anguish in her poor little breast, Vi took this bold step. She had been sitting thus for hours crying all alone, and thinking to herself that this horrible blank was to go on forever, that she would nevermore hear of him even—and I have not the heart to blame her for appealing thus to the first possibility of

help. She made a step forward, and looked at him with a pitiful little smile. “Perhaps you do not remember,” she said, “but I think I am sure it is you. I never forget people whom I have once seen. Did not you row us once, on the Thames, at Eton—my father and —”

“Oh yes, ma'am, to be sure!” cried Dick. “I knew that I had seen you before.” He was a little confused, after his experience with Lady Eskside, how he ought to address a lady, but after reflection decided that “ma'am” must always be right; for had he not heard the queen herself addressed by the finest of fine ladies as “Ma'am”?

“Yes; and I remember you,” said Vi. Then she made a pause, and with a wistful glance at him, and a sudden flush which went as quickly as it came, added — “I am Mr. Ross's cousin.”

“I recollect now,” cried Dick. “He was so set on it that you should see everything. I think he was a bit better when I left.”

“Better!” cried Violet, clasping her hands together; “was he —” She was going to say, was he ill? and then reflected that perhaps it was best not to betray to a stranger how little she knew of him. So she stood looking up in his face, with great eyes dilated. Her eyes had been pathetic and full of entreaty even when poor Vi was at her happiest. Now there is no telling how beseeching those pretty eyes were, with the tears stealing into them, making them bigger, softer, more liquid and tender still. This look quite made an end of poor Dick, who felt disposed to cry too for company, and was aware of some strange, unusual movements in his own good heart.

“Don't you fret,” he said soothingly; “I brought the old lady the news this morning. He had an accident, and his illness was sudden. But it had nothing to do with the accident,” he added. “Don't be frightened, ma'am. It's some fever, but not the worst kind; and the doctor told me himself that he'd pull through.”

“Oh, Mr. Brown!” cried poor Vi. She dropped down upon a fallen tree, and began to cry, so that he could scarcely look at her for pity.

“Indeed you must not be frightened,” said Dick, “I am not anxious a bit, after what the doctor told me. Neither is the old lady up there at the Castle—Lady Eskside. She is going with me to-morrow morning to help to nurse him. Mother has him in hand,” Dick added

with a little pride, "and he's very safe with her. Don't fret like this—now don't! when I tell you the doctor says he'll pull through."

"Oh Val, Val, my Val!" cried poor little Violet. It was not because she was frightened; for at her age—unless experience has taught otherwise—getting better seems so necessary, so inevitable a conclusion to being ill. She was not afraid of his life; but her heart was rent with pity, with tenderness, with that poignant touching remorse to which the innocent are liable. All that had gone before, all that Valentine had suffered, seemed to come back to her. It was not her fault, but it was "our" fault. She seemed to herself to be involved in the cause of it, though she would have died sooner than harm him. Her lips began to quiver, the tears rained through the fingers with which she tried to hide her piteous streaming eyes. "Oh Val, Val, my Val!" she cried. It was "our" fault; her father had done it, and even good Sandy had had his share; and herself, who had twined her foolish little life with his, so that even parting with her had been another complication in Valentine's woes. She seemed to see him looking up at her in the moonlight, bidding her good-bye. Oh, why did he think of her? why did he take that trouble for her? She scarcely heard Dick's anxious attempts at consolation. She was not thinking of the future, in which, no doubt—how could she doubt it?—Valentine would get better; but of the past, and of all that made him ill. Her tears, her abandonment to that sorrow, her attempts to command herself, went to Dick's heart. He stood looking at her, wondering wistfully for the first time in his life, over the differences in men's lots. If he (Dick) were to fall ill, his mother, no doubt would be grieved; but Dick knew that it would create no commotion in the world; would not "upset" any one as Val's illness did. Naturally, the good fellow felt, Mr. Ross was of much more importance than he was or would ever be; but still—

"Oh, how foolish you must think me!" cried Violet, drying her eyes. "It is not that I am frightened. It is because I know all that made him ill. Oh, Mr. Brown, tell me about it—tell me everything. He is my cousin, and he has always been like my—brother. He used to bring me here when I was a child. You can't think how everything here is full of him—and then all at once never

to hear a word!" Between every broken sentence the tears fell in little bright showers from Violet's eyes.

Dick sat down on the same fallen tree, but at a respectful distance, and told her all he knew—which was not everything, for his mother did not enter into details, and he knew little about the incident on the river, and her share in it. Violet listened, never taking her eyes from his face, which was hard upon Dick, yet not undelightful to him. He had gone through a great many experiences that morning. But even Lady Eskside's strange emotion, her curiosity about himself, and agitated manner, had not the same effect as this still more unexpected and strange encounter. He sat, at first rather awkwardly, upon the edge of his end of the tree, with his face turned towards her, but not always bold enough to look at her. The slant of the sunbeam, which was gradually dying off the scene, fell in the middle between them like a rail of gold, separating them from each other. Across this heavenly line of separation her eyes shone like stars, often bewildering Dick, though he kept pretty straight in his narrative, taking as little account as possible of the occasional giddiness that came over him, and the dazzling sensation in his eyes. Violet, interrupting him now and then by a brief question, sometimes crying softly under her breath, gave her entire attention to every word; and Esk ran on through all, with a murmur as of a third person keeping them company; and the wood contributed those numberless soft sounds which make up the silence of nature, enveloping them in an atmosphere of her own. Dick was not much given to poetry, but he felt like something in a fairy tale. It was an experience altogether new and strange; for hitherto there had been no enchantments in his life. How different it was to her and to him! To the young man, the first thrill of romance, the first touch of magic—the beginning of all sweet delusions, follies, and dreams; to the girl, an imperfect, faltering narrative, filled out by imagination, a poor, blurred picture—better, far better, indeed, than nothing, and giving her for the moment a kind of miserable happiness, but in itself nothing. It is frightful to think at what a disadvantage people meet each other in this world. Dick's life, which had all been honest prose up to this moment, became on the spot, poetry; but, poor fellow, he was nothing but prose, poor prose to Vi, to whom these

woods were full of all the lyric melodies of young life. She listened to him without thinking of him, drinking in every word, and not ungrateful, any more than she was ungrateful to the fallen tree, or the beech boughs that sheltered her. Nay, she had a warmer feeling, a sense of grateful friendship, to Dick.

From All The Year Round.
EARLY EASTERN TRAVELLERS.

MANDEVILLE.

INASMUCH as Sir John Mandeville — albeit not excessively scrupulous as to his facts — exhibits a tincture of science from which other mediæval travellers are remarkably free, it may be well, before following the worthy knight on his wanderings, to put ourselves in the place of an early eastern traveller, by recalling, as clearly as may be, the idea of configuration of the earth which was accepted as accurate in his day. In the year of grace, 1874, it may be affirmed that any average child of twelve years of age, who has been to school at all, has clearer ideas of the solar system than the hardy voyagers who, in quest of pleasure or profit, traversed the Mediterranean in the middle ages. The idea of the earth as a mere satellite of the sun had, it is true, occurred to Pythagoras, as forming part of a cosmic universe, in which planets revolve around a central fire, or sun; and the sphericity of our world had been taught by Thales of Miletus, and, at a later date, by Aristotle and his followers, until what is called the Ptolemaic system was generally accepted by geographers. This scheme of the universe flattered the vanity of mankind, by making the earth the centre, around which revolved the sun, moon, and planets. Towards the sixth century, however, the sphericity of the earth fell into disfavour, and, in the general darkness which shrouded the human mind from the fifth to the twelfth century, the theory originally propounded by Xenophanes — that the earth is a high mountain, with stars floating round its summit, was very generally accepted. Sunrise and sunset were explained by the enormous elevation of the centre of the world, which was supposed to cut off the rays of the revolving sun. The evident convexity of surface was ascribed to the lower position of the warmer countries, and this hypothesis was supported by the bold assertion that

the rivers which ran southward were infinitely more rapid in their course than those which — owing to trifling inequalities of surface — ran in the opposite direction. Far away to the north, beyond the country of the Hyperboreans and paradise itself, was the land of darkness and perpetual night, wherein no man might abide; while to the south lay a fiery tract equally uninhabitable by human beings. Stated roughly, then, the mediæval world was a huge mass — square or round — deflecting somewhat to the south, and consisting of the ancient Roman Empire, the empire of Alexander, the realms of the unconquered Scythians, and India. This world was surrounded by the ocean, beyond which lay, according to Cosmas Indicopleustes, the regions inhabited by men before the flood.

This same Cosmas, who died about 550 A.D., may be fairly considered the best and clearest exponent of the astronomy and geography of the dark ages. In early life a merchant, trading from Alexandria to India, he probably saw a great deal of the world, and becoming in later life a monk at Alexandria, he penned the famous volume which bears his name. His work is of a distinctly controversial character, having been written to confute those philosophers who wickedly persisted in reasserting the doctrines of ancient pagans, who had declared the earth to be a sphere, and insisted on the existence of antipodes. With that intense bitterness which is even more conspicuous in scientific than in theological controversy, Cosmas pulverizes his adversaries by argument and sarcasm, and, after going to the length of making a picture of four men, trying to stand on a globe, about a foot in diameter, dismisses the antipodists with immeasurable contempt. He then proceeds to show that inasmuch as of the four elements — earth, water, air, and fire — earth is by far the heaviest, the earth must naturally be the centre and base of the universe, for “if there were anything beyond the earth it would naturally fall.” The earth is therefore pictured as an oblong mountain, around which, at a considerable distance below the summit, the sun performs its daily revolution — the portion of the hill above the sun being the land of darkness. The base of the vast elevation is washed by the circumambient ocean, of which the known seas were supposed — accurately except in the case of the Caspian — to be inlets,

or gulfs. At the extremity of ocean, "the inferior parts of heaven descend upon it and the upper part is a vault."

This scheme of the universe looks very well in elevation, or section, but when reduced to a ground-plan or map produces the oddest effect. The earliest mediæval map of the world presents many extraordinary features. It is oblong in form, being longest from east to west. Around the four sides of the parallelogram is a broad margin occupied by the ocean, which in four places penetrates far into the terrestrial portion. These inlets are the Sinus Romanus or Mediterranean, the Red Sea, the Persian Gulf, and the Caspian Sea. As there were four elements and four gulfs, so also were there four great rivers rising in the terrestrial paradise, a region depicted in a sort of supplementary parallelogram beyond the ocean to the eastward. These rivers were supposed to flow under the ocean, and to reappear in the known world at indeterminate spots. On the north side of the parallelogram, is the "transoceanic land inhabited by man before the flood," and on the southern side is a similar tract, simply designated "*terra ultra oceanum*."

This theory of rivers lasted, with slight modifications, to Mandeville's time, and is thus set forth by that worthy knight: "Of Paradise I cannot speak properly, for I was not there. It is far beyond (the realms of Prester John), and I repent not going there, but I was not worthy. But as I have heard say of wise men beyond, I shall tell you with good will. Terrestrial Paradise, as wise men say, is the highest place of the earth; and it is so high that it nearly touches the circle of the moon there, as the moon makes her turn; for it is so high that the flood of Noah might not come to it, that would have covered all the earth of the world all about, and above and beneath except Paradise. And this Paradise is enclosed all about with a wall, and men know not whereof it is; for the wall is covered all over with moss as it seems; and it seems not that the wall is natural stone. And that wall stretches from the south to the north, and it has but one entry, which is closed with burning fire, so that no man that is mortal dare enter. And in the highest place of Paradise, exactly in the middle, is a well that casts out the four streams which run by divers lands, of which the first is called Pison or Ganges, that runs throughout India. And the other is called Nile or Gyson,

which goes through Ethiopia, and after through Egypt, and the other is called Tigris, which runs by Assyria, and by Armenia the Great; and the other is called Euphrates, which runs through Media, Armenia, and Persia. And men there beyond say that all the sweet waters of the world, above and beneath, take their beginning from the well of Paradise, and out of that well all waters come and go."

It is worthy of remark, that, between the time of Cosmas and that of Mandeville, the position of the terrestrial paradise had shifted somewhat. It was still held to be in the east, but was no longer beyond ocean, and the rivers flowed downwards from a high place instead of tunnelling under the ocean, "for," says the knight, "many great lords have assayed with great will many times to pass those rivers towards Paradise with full great companies; but they might not speed in their voyage; and many died for weariness of rowing against the strong waves; and many of them became blind, and many deaf, for the noise of the water, and some perished and were lost in the waves." The terrestrial paradise, indeed, presented enormous difficulties to mediæval geographers. At times it appears to have been located in Central Asia; occasionally it occupies Central Africa; and always presents the awkward problem of a water-shed from which flowed not only the Tigris, Euphrates, and Ganges, rivers bending southwards, but the Nile, which flowed northward from that portion of the earth which was assumed to lie lowest down. Apart, however, from the location of the terrestrial paradise and the difficulty of reconciling the theory of four rivers with the facts of geography, mediæval map-makers appear to have done well according to their lights, for — puerile as their conceptions may appear to any young gentleman of the nineteenth century, who has struggled successfully through an examination in astronomy and physical geography — it may yet be well to reflect for a moment whether mediæval cartographers were not truly philosophical, in reasoning from the facts already observed by travellers. The size and shape of the earth were necessarily unknown to the ancients, and, as increased knowledge dawned upon the nations, the world only became known bit by bit. Centuries elapsed before the Caspian was recognized as a lake, and ages passed away before China and India were discovered.

This truth, that ancient geographers reasoned fairly from the facts before them, was vividly impressed upon me on meeting with Sir John Mandeville's astounding statement that the city of Jerusalem is, and must be, the centre of the world. At the first glance Jerusalem appears the most unlikely spot in the world to select as a central point, and I was inclined to refer the belief as to its central position as due, rather to the fervid faith, than to the geographical knowledge of the author, who was yet a skilled physician and eminent natural philosopher of his day. It occurred, however, to me that it would not be unbecoming in a philosopher of these days to make an experiment, and test the at first sight amazing assertion of a traveller who saw men and cities and wrote an account of them five hundred years ago. I accordingly took a pair of compasses, and making Jerusalem my centre and Iceland my radius, described a circle, and found that it included the whole of the then known world—the immense extension of Asia to the eastward, described by Marco Polo, not being at that time generally credited. I found that within the circle were Europe, North-east Africa nearly as far south as the sources of the Nile, Arabia, Persia, India as far as the Punjab—the limit of Alexander's victories—Asia Minor, Armenia, Afghanistan, and the vast tract of Asia extending from the Himalayas to the mouth of the Obi. I thus got an almost exact reproduction on a modern map of the celebrated *Mappa Mundi* drawn by Marino Sanuto in the year of grace 1320, and preserved in the library at Paris.

This slight shock to scientific self-sufficiency prepared me for a second and more careful study of the "Voiage and Travaile of Sir John Maundeville, Knight."

In the first quarter of the fourteenth century the spirit of the middle ages fairly melted into another train of thought. One of the "first men of the century" was Sir John Mandeville, knight, of St. Albans, physician, philosopher, and soldier. He commenced the travels which have immortalized his name at a noteworthy period. Joinville and Marco Polo, representatives of the military and commercial schools of travellers, were just dead, as Mandeville, a wandering free lance with a scientific turn—an educated Dugald Dalgetty—started on a tour which lasted for three-and-thirty years. A fervent Christian and a pilgrim to the Holy Sepulchre, then in Sara-

cenic hands, Mandeville was yet a thorough soldier of fortune, and served the Soldan of Babylon (Cairo) so well, that this powerful ruler offered to marry the English knight to a Paynim princess if he would only forswear his country and his faith. Throughout his narrative are indications of that revival of learning, and of that spirit of scientific investigation, which signalized that remarkable period of transition during which Petrarch perfected the sonnet, Boccaccio taught the world how to tell a story, Chaucer produced the first important poem, and Mandeville himself wrote the first prose volume in the English language.

Like the French of Villehardouin the English of Mandeville is puzzling to the modern reader, and a habit the good knight had of spelling the same word in half-a-dozen different ways adds to the embarrassment. In clerkship, however, the English knight was far in advance of his French predecessors. He wrote his book in three languages, in Latin, in French, and in English, and states in the French version, which was apparently the first written, "I would have put this book into Latin to devise more briefly; but as many understand French better than Latin, I have written it in Romant in order that any one may understand it, and the lords, knights, and others who comprehend not Latin." It is said that the copy presented to Edward the Third was in French, and it is by no means clear that the English version was written by the hand of Mandeville himself, but there is no doubt that all three versions became extremely popular within a few years after their publication, from the many copies yet extant among collections of manuscripts. Popular as was the work of Sir John Mandeville during the fourteenth and fifteenth centuries, very little is known of the author himself. The year of his birth is not exactly known, and the time of his death is variously placed from 1371 to 1382, although the place of his decease was undoubtedly Liège. His own book throws little light on his career. Beyond the incidental mention of his serving in the army of the Soldan of Babylon, whom he appears to have forsaken about 1341, and a subsequent allusion to his having seen part of India, and to his having served for a short space the Grand Khan, the knight leaves us absolutely in the dark as to what he did, beyond performing the pilgrimage to the Holy Sepulchre. If we assume

him to have started in 1322, the earliest date assigned, an interval of thirteen years elapses between his departure from Cairo and his return to England. What was he about all this time in the Indian seas? He appears to have visited the court of the Great Kahn of the Mongols, for he says distinctly, when speaking of the mechanical peacocks at the Great Khan's table, who "danced, sang, and clapped their wings together," that he busied himself "to learn the craft" of making them; when the master excused himself on the plea that he had "made a vow to his god to teach it no creature but only to his eldest son." This anecdote seems to indicate that Mandeville was a man of some consequence at the Mongol court; albeit his evident borrowings from Marco Polo encourage a belief that he was never there at all, but compiled his account of the Tartars, like many of his other narratives, from older and well-known authors. His book, indeed, is altogether a curious composition. Professing to be an itinerary of the Holy Land, it is a huge compound of what he saw and what he heard; and, although he occasionally prefaces an unusually tough story with "they say," he gives his personal authority to many astounding stories, and mixes his actual and "hearsay" evidence together in a way at once amusing and perplexing. Throughout his book there is, however, an obvious desire to "efface himself." Whether this arose from a Christian humility entirely absent in other travellers, or from a wish to conceal the particulars of a "shady" career, must forever remain unknown. All that we know from the knight himself is that at his coming home he went to Rome "and showed my life to our holy father the pope, and was absolved of all that lay in my conscience of many divers grievous points, as men must need that are in company, dwelling amongst so many divers people, of divers sects and beliefs as I have been. And, amongst all, I showed him this treatise that I had made after information of men that knew of things that I had not seen myself, as far as God would give me grace; and besought his holy fatherhood that my book might be examined and corrected by advice of his wise and discreet council."

Mandeville's book was compared with another, by which the *Mapa Mundi* (probably Sanuto's) was made, and received the full approbation of the Holy See; whereupon he hid him northwards, coming home, "in spite of myself, to rest,

for rheumatic gouts that distress me and fix the end of my labour against my will (God knoweth). And thus taking comfort in my wretched rest recording the time passed, I have fulfilled these things and written them in this book, as it would come into my mind, the year of grace 1356 in the thirty-fourth year that I departed from our country. Wherefore I pray to all the readers and hearers of this book, if it please them, that they would pray to God for me, and I shall pray for them."

One of the most remarkable features of this singular work is the evidence it affords of a great advance in geographical knowledge since the period of the first crusade. Mandeville devotes the whole of a highly interesting chapter to an attempt to prove the earth a sphere, and the existence of antipodes not only possible but in the highest degree probable. From a scientific point of view this chapter is worth all the rest of the book put together, as it affords evidence that during his long sojourn at Cairo he had become indoctrinated with the systems of Arab geographers. In the beginning, these also, like their western rivals, believed the earth to be entirely flat, but beyond the circumambient ocean placed a mysterious range of mountains. It is, however, well known that the speculations of ancient Greek philosophers were filtered through Arabic manuscripts into the learning of the later middle ages; and it is therefore probable that Mandeville acquired some of the remarkable opinions, expressed by him in his seventeenth chapter, from an Arabic source. The doctrine that the earth is a sphere had succumbed to the arguments of Cosmas, and was generally discredited throughout the western world; but, nevertheless, Mandeville advances numerous arguments, some of which are apparently so far ahead of his age, as to excite both astonishment and admiration in the modern reader. Contrary to all practice, he advances (on this occasion) physical proof of his theory. When speaking of the Island of Lamary, in the Indian Ocean, he says:—"Neither in that land, nor in many others beyond it, may any man see the Polar Star, which is called the star of the sea, which is immovable and is towards the north, and which we call the loadstar. But they see another star opposite to it towards the south, which they call Antarctic. And right as shipmen here govern themselves by the loadstar, so shipmen be-

yond those parts are guided by the Star of the South, which appears not unto us. . . . For which cause we may clearly perceive that the land and sea are of round shape and form, because the part of the firmament appears in one country which is not seen in another country. And men may prove by experience and then understanding that if a man found passages by ships, he might go by ship all round the world, above and beneath; which I prove thus after what I have seen." Here follow several measurements, taken with the astrolabe, of the height of the Polar Star and others of the Antarctic, whence Mandeville concludes "that these two stars are fixed, and about them all the firmament turns as a wheel that turns on its axle-tree; so that those stars bear the firmament in two equal parts; so that it has as much above as it has beneath. After this I have gone towards the south, and if I had had company and shipping to go further, I believe that we should have seen all the roundness of the firmament all about." Calculating his measurements of the Polar Star and the Antarctic, and the proportion of the firmament he had seen, he continues:—"I tell you, certainly, that men may go all round the world, as well under as above, and return to their country, if they had company and shipping and guides; and always they will find men, lands, and isles, as well as in our part of the world. For they who are towards the Antarctic are directly feet opposite of them who dwell under the Polar Star as well as we, and they that dwell under us are feet opposite feet. For all parts of the sea and land have their opposites habitable or passable."

Pondering over this remarkable chapter, it is impossible to avoid the conclusion that Mandeville has been done scant justice to by posterity. His popular reputation is that of a teller of old wife's tales, and yet we find him, more than a century before Columbus, demonstrating the spherical form of the earth, and the possibility of circumnavigating it.

The great body of Mandeville's book is filled with accounts of distant countries, strangely mixed with the fables recounted by ancient historians and monkish chroniclers.

On visiting Cyprus he records a curious version of the story in the Decameron, and describes a custom of hunting with "papyons" described by some commentators as "large wild dogs;" but as Mandeville says they resemble leopards,

there can be little doubt that the practice of hunting with the "cheetah" had, in the middle ages, penetrated as far west as Cyprus. At Joppa or Jaffa were many wonders, among which "may still be seen the place where the iron chains were fastened with which Andromeda—a great giant!—was bound and put in prison before Noah's flood; a rib of whose side, which is forty feet long, is still shown." Mandeville is profuse in his description of the Holy Land, where he probably abode for a while, but is more to be relied on, so far as he confines himself to what he saw, when he speaks of Egypt. Curiously confounding the modern Babylon (Cairo) with the ancient city of that name, he fails not to recount the history of Shadrach, Meshach, and Abednego, and then, immediately after, proceeds to describe the actual residence of the sultan under whom he served for many years: "The sultan dwells in his Calahelyke in a fair castle, strong and great, and well set upon a rock. In that castle dwell always, to keep it and serve the sultan, more than six thousand persons, who receive here all necessaries from the sultan's court. I ought to know it well, for I dwelt a great while with him as soldier in his wars against the Bedouins; and he would have married me full highly to a great prince's daughter if I would have forsaken my law and my belief. But I thank God that I had no will to do it for anything that he promised me."

In his next mention of Babylon he distinguishes clearly between the ancient city and Cairo, for saith he, "You must understand that the Babylon whereof I have spoken, where the sultan dwells, is not that great Babylon where the confusion of languages was first made by the miracle of God, when the great tower of Babel was begun, of which the walls were sixty-four furlongs high; for that is in the deserts of Arabia, on the way as men go towards the kingdom of Chaldea. But it is full long since any man dare approach to the tower, for it is all desert and full of dragons and great serpents, and infested by divers venomous beasts."

In the fashion customary to mediæval travellers he calls the pyramids the barns or granaries of Joseph, following therein the Saracen traditions, and gives a full account of the river Gyson (Nile) and its overflow, and continues, "this river comes from Terrestrial Paradise between the deserts of India; and after it descends on the earth, and runs through many ex-

tensive countries under the earth; and after it comes out under a high hill" — this corresponds closely with Joinville's account — "which they call Alothe, between India and Ethiopia, at a distance of five months' journey from the entrance of Ethiopia; and after it environs all Ethiopia and Mauritania, and goes all along from the land of Egypt to the city of Alexandria to the end of Egypt where it falls into the sea."

Mandeville now proceeds to depict the phoenix after the manner of Pliny; the apples of paradise, which "though you cut them in ever so many slices or parts, across or endwise, you always find in the middle the figure of the holy cross;" and the "apples of Adam, which have a bite on one side." At Bethlehem he finds the field Floridus, wherein a fair maiden who had been unjustly accused of wrong was doomed to be burned, and after praying devoutly "entered into the fire, and immediately the fire was extinguished, and the faggots that were burning became red rose bushes, and those that were not kindled became white rose-bushes, full of roses. And these were the first rose-trees and roses, both white and red, that ever any man saw." Of the Dead Sea he evidently speaks from hearsay, for "if a man cast iron therein it will float on the surface, and if a man cast a feather therein it will sink to the bottom;" but he adds, significantly, "These are things contrary to nature."

He also narrates the well-known story of the apples of the Dead Sea, and the curious mediæval legend of the knight who watched seven days by a certain sparrowhawk and then had his wish. India, where the mysterious Mandeville may or may not have been in the flesh, supplies many wonderful stories. On the way to India is the island Hermes (Ormuz), where there is a great heat, and also "ships without nails of iron or bonds, on account of the rocks of adamant (loadstone), for they are all abundant thereabout in the sea, that is marvellous to speak of; and if a ship passed there that had either iron bonds or iron nails it would perish; for the adamant by its nature draws iron to it; and so it would draw to it the ship, because of the iron, that it should never depart from it." This is one of the extraordinary mixtures of fable and fact in which early travellers take especial delight. The mountains of magnetic ore are the subject of traditions far older than the Arabian Nights; but the "sewed ships" which traded to Ormuz

were plain matter-of-fact coasting vessels, which were sewed together, duly payed and caulked, merely on account of the scarcity of iron. Marco Polo gives a lengthy account of these ships, but is far too cautious to refer to magnetic mountains as the first cause of their peculiar manufacture. Another marvel is the Well of Youth, whereof Mandeville drank three or four times and says, forgetting for the moment his rheumatism, "Methinks I still fare the better." Shifting the venue to the island of Dondun, we are introduced to people of wicked ways: so that the father eats the son, the son the father, the husband the wife, and the wife the husband. Whether this arises from extreme affection or from a desire to "utilize waste products," is not set forth, but the customs of the African Fans justify Mandeville's narrative. He next describes the "men with heads beneath their shoulders," and "drags in by the hair" the Cyclops and the "people who go upon their hands and feet like beasts and are all skinned and feathered, and would leap as lightly into trees and from tree to tree as squirrels and apes." These are the veddahs of Ceylon, the aborigines who dwelt in trees and cured venison with honey; but in the next line is an account of people "who go always upon their knees, and have eight toes on every foot." Immediately after this astounding story is an account of trees that bear wool (cotton) "as though it were of a sheep, whereof men make clothes and all things that may be made of wool." Prestre John, whose realms are placed in India, is a Christian potentate living near the "gravelly sea," and near unto him is the Perilous Valley, wherein Mandeville says he went, and after descending upon the Devil's Head in this same valley, gives a capital account of cokernuts and "gerfauntz" (giraffes), which are spotted and a little higher than a horse, with a neck twenty cubits long, and the croup and tail are like those of a hart, and one of them may look over a high house." The porcupine is also well treated; but coal, so admirably described by Marco Polo, is transposed into "a manner of wood hard and strong; and whoever covers the coals of that wood under the ashes thereof the coals will remain alive a year and more." This strange jumble of truth and fiction is easily explained. Sir John Mandeville was a physician, philosopher, and soldier, but employed the common devices of book-making. Being a well-

read man he not only availed himself of all the science then extant, but reinforced it with the fables told by ancient writers such as Pliny. No modern reader can peruse his wonderful book without regretting that he did not give more space to his personal adventures and less to difficult and laborious compilation. Had he only written the record of his own adventurous life he would have presented us with a wonderful picture of a mediæval traveller, who combined the perceptive qualities of a physician with the acquisitive faculties of a free lance.

From Fraser's Magazine.
ON THE VATNA JOKULL.

VATNA JOKULL is to most people only a sound indicative of something Norse, and they dismiss it with the remark, "Oh, some place or another up in Iceland." But it really demands more attention, and in the year 1861 Mr. W. Longman, in an able address delivered to the Alpine Club, of which he was then vice-president, impressed upon his hearers the manifold advantages that might possibly accrue to science from an exploration of that district, and the probable grandeur of scenery that would meet the view of the explorer who should venture to penetrate its recesses. Moreover, its name is by no means unknown to travellers, and especially to persons interested in volcanic phenomena and physical geography.

In Iceland itself the famous Vatna Jökull has hitherto been regarded as a mountainous, ice-bound expanse, a land of mystery and terror. All that was known about it was, that from amongst its five thousand square miles of icy solitude issued, from time to time, violent eruptions, while the other volcanoes in the island were perfectly inactive; that from the s.w. part of it, viz. Skapta Jökull, burst forth at the end of the last century the most violent eruption of historic times, from which flowed one of the largest known lava streams, if not the largest. Wild legends, too, exist concerning outlaws who were supposed to dwell among its fastnesses; and beyond this it was simply regarded as a terrible region "which never had been and never could be investigated."

There is something amazingly attractive about unknown land. From my boyhood I had longed to adventure into this untrodden ground, and penetrate to the

spots where the awful struggle had taken place or might still be going on between frost and fire. With this purpose, accompanied by the Rev. J. Wynne, I visited Iceland this summer, and, having seen many places of interest in the island, we turned our horses' heads towards Nupstad, a farm upon the south of Vatna Jökull, from which point I had determined to attack the mountain region. We had enlisted the services of Paul Paulson, an enterprising young fellow, nephew of the pastor of Presbakki.

When we left Presbakki for Nupstad, a distance of twenty-five miles, our road lay across a black sandy plain, which in dry windy weather is intolerable. The August morning was bright, though there had been heavy rain in the night. A scanty herbage and a few patches of wild oats made the ground very good for travelling, and as we were so near our destination we did not scruple to make our horses put their best foot foremost. Before us stood the beetling crags which overhang the farm of Nupstad. Farther to the s.e. rose the snow-clad heights of Orefa, the highest mountain in Iceland, with its glaciers sloping down apparently to the sea, while to our left and north were the fine basaltic cliffs which skirt the outlying hills of Vatna and Skapta Jökull, sweeping in graceful curves, terrace after terrace displaying beautiful columnar structures. Numerous caves, some of which have their weird Norse legends, indicated perhaps the wash of oceans, long before the eye of man ever rested on the dark crags they penetrate. Mountain streams, now swollen by the previous rain, leaped from the summit and dispersed themselves in spray long ere they reached the bottom of the black cliffs, collecting themselves again as if by magic underneath, rippling along between the lava blocks, and spreading out upon the broad black sandy plain, where it was difficult to believe that the water before us was the same which we last saw losing itself over a precipice of two hundred feet.

To our right and south, beyond the black desert and grey lava fields, was the ocean glittering in the sun, which now shone down so warmly that we were glad to ride along in our shirt-sleeves; and many were the hopes expressed that we might have weather like the present for our trip upon the Vatna Jökull. What are those rocks and ridges jutting out into the sea? that cluster of mushroom-shaped objects half-way across the plain?

Surely they were not there five minutes ago! It is but the mirage which we have noticed ever since we struck the plains of sand and lava; but at this time the appearances were plainer than usual, perhaps in consequence of the heavy rain which had fallen during the night. These forms are constantly varying, sometimes seeming like rocks, men, cattle, and farms, in places where we are sure there are none. The nature of the larger images is easily detected by the tremulous movement characteristic of the phenomenon, but the smaller ones are very deceptive. Here we find the same illusion so familiar upon the prairies of Western America, a weed or rock being so highly magnified and distorted in shape as to appear as a tree or shed or some other well-known object. After riding several hours we are amongst the lava which has flowed down the valley of the Dipou from the "*Hågaunga Hnukur*," or Highgone Hills, two craters upon the south of Vatna Jökull, and the last points visible from the surrounding country. The lava which has flowed down the bed of the river Dipou in one deep stream here spreads out upon the plain in a much thinner flood, towards a large salt marsh leading to the sea, where it terminates in a bed of clinker and volcanic *débris*. The lava is fine and cellular, containing minute crystals of feldspar. Dipou means deep river, and it is a dangerous fiord, especially when the water is at all high, and its bed is full of deep holes in the lava, which at any time are very trying to the horses, and may give the careless rider a wet skin.

We reached Nupstad about 4 P.M., and were welcomed by Ayolver the farmer, who was expecting us, and remembered my former visit to his farm in 1871. During the interval which had elapsed his wife had died, and he had just married again—a fact which occasioned a bountiful supply of provender, and elicited from us complimentary speeches befitting the event.

After seeing to our horses, our first enquiry was, whether we could hire men for our expedition; but we were dismayed by the reply that not a man could be spared, for they were already behindhand with their hay-harvest in consequence of the marriage festivities, and every man, woman, and child had now to work their hardest to make up for lost time. Moreover the farmer added that he doubted if we could get men from any of the neighbouring farms. This was indeed "a

damper." At this season of the year the hay is the all-important question, for unless the Icelander makes hay during the few days that the sun *does* shine in the last two months of summer, he gets no other chance, and it is a poor prospect for his unfortunate cattle through the long dreary months of winter.

Affairs being thus desperate, Paul, who had his heart thoroughly in the work, snatched a hasty meal, and although he had ridden from Presbakki, at once took a fresh horse to scour the country for men to accompany us. We were lodged in a little church, which was used as a storehouse, there being no pastor to hold service in it. The good people at Nupstad did all that lay in their power to accommodate us, and after the rough travel we had experienced we quite relished the better food, cleanliness, and comfort of Nupstad; for, though an Icelandic house cannot come up exactly to our idea of cleanliness, the people at Nupstad were perhaps as clean as it was possible to be under their circumstances. My companion, Mr. Wynne, was quite delighted with the view of the castellated rocks behind the "*boer*," as the Icelandic farms are called, which I had before described to him.

These rocks run to the height of about three hundred feet, and appear to grow more and more like battlements. Even since my last visit in 1871 the basalt has fallen away considerably, cleaving off in the regular angular masses peculiar to this formation, so much resembling the ruined works of man. In the afternoon we took a walk to the Sola River, which flows down from the Vatna. The waters from the melted snow collect in the little Lake of Grimsptn, some three thousand feet above the sea-level, whence the river flows down a deep cañon to the sea.

On our way we passed a huge rock which stands to the east of the farm. It is many hundred feet high, and is cleft in several places from the top nearly to the bottom. The face of the rock curves inwardly, and, when viewed from some aspects, it has the appearance of a church-organ, the columnar basalt representing the pipes. We stopped to listen to the remarkable echoes which exist here, and which even more than its form make it deserve the name we gave it of "*Organ Rock*." Our shouting scared out a few gulls and ravens, and we continued our ramble to the point where the river Sola first comes into sight. Here we turned

to view the basaltic terraces which sweep round and terminate the Björns, which hills are here the first step from which the Vatna rises. In many places, especially to the west of Nupstad, the columnar structure is very marked; but the columns are perpendicular, and have none of the fan-like divergence or convergence so remarkably striking in other parts of the island. I saw no traces of dykes in these cliffs, although I searched for them throughout our ramble.

The river was wonderfully changed since I last visited it. Instead of being a deep single stream, rolling with swift and steady current over a shingly bed, it is now shallow and ten times broader, struggling over a bed of loose black sand, and apparently there is a greater amount of water flowing. The glacier upon the east side of the river has advanced, I should say, half a mile, there being much more sand mingled with the ice and *névél*. Perhaps the matter thrown up by some bygone eruption of the Vatna has been worked down by the glacial action, and has just come to light, after being buried for years in ice and snow. Although the glacier has advanced, it has lost considerably in height, and is altogether altered in appearance. Before we left the Sola the clouds which had lain so heavily upon Örefa all the day began to roll away, and the summit was plainly discernible, although the remainder of the mountain was obscured. As we returned towards the farm we remarked how lofty the Icelandic mountains looked, considering their stated height; but it must be remembered that they generally rise directly from the sea-level.

With much difficulty Paul succeeded in obtaining two recruits for the expedition, and then without delay we began to arrange the supplies, and direct the manufacture of a hand-sleigh and a pair of snow-shoes. The clouds had settled upon the hills, and the wind had shifted to the east; towards noon it began to rain. What a difference the weather makes in Iceland, where one's pleasure entirely depends upon open-air enjoyment! I can conceive no place more utterly wretched in wet weather, or more truly enjoyable in fine.

My provisions for the ascent of Vatna consisted of butter, stock-fish, biscuit, Liebig's extract of meat, and a kind of pemmican, which I prepared for the purpose, sugar and whiskey, also coffee and soup for use during our first day's march upon the *fjald*. I gave to each man a little

bottle to be constantly filled with snow, for the want of water is one of the principal difficulties upon these Jökulls. It is impossible with a spirit-lamp to melt enough snow for a large party; moreover, it takes twice as much spirit to reduce the snow to water as it does to boil it. On reaching the line of perpetual snow, in addition to the absence of water, one is plagued with an increased thirst, owing to the rapid evaporation from the body. I found the best plan (as it is fatal to eat snow) was that each man should carry a small flask wrapped in flannel in his bosom. Into each flask I from time to time poured a little whiskey, in order to make the snow melt quickly, and render the water more palatable. I also took care that each man should keep his flask filled with snow, and thus secured the advantage of having a few mouthfuls of liquid always at hand.

On Tuesday, August 10, the weather cleared, and every one was in good spirits. Mr. Wynne, myself, the farmer, and Paul, with Blartny and John, my two fresh men, sat down to a substantial meal in the new room which the farmer had just added to his house. The repast consisted of pickled ox-head, a remnant of the marriage-feast, and doubtless kept for our entertainment. I could not help remarking how much more fitting such a start was for men about to undertake a rough trip than is often the case in other countries, from an hotel, where waiters are buzzing about, and people getting in the way. Here everything was deliberate, the food simple, clean, and wholesome, and every one meant business, as we all stood up to drink success to the expedition in some good Scotch whiskey. We then mounted our horses, and crossing the river Dipou we turned to the north up the valley down which that river flows. It is down this valley that the lava stream I have before mentioned descended from the Highgone Hills; it appears to have advanced at a very rapid rate, descending about 2,500 feet in eight miles. It has entirely taken up the former bed of the river. The sides of the lava present a remarkable instance of subsidence, abounding in lateral cracks and rifts throughout its course, which is full of wonderful basaltic columns; and down these rifts the torrent pours in magnificent waterfalls and foaming rapids. About half way up the valley, upon the right, a black basaltic cliff, several hundred feet in height, has been cleft to its

centre by some violent convulsion of nature, forming a dark chasm whose gloomy depths the eye cannot penetrate. Down this cleft one half of the Dipou is precipitated in a roaring mass of foam upon the lava bed, more than a hundred feet beneath. The other arm of the Dipou takes its rise from an icy cavern in the glacier, several miles to the east, towards Groenafjall. In two bounds it sweeps clean down a slope of ice to the valley, and, fed by various glacial streams, it rushes along till, striking the lava field, it spreads in sheets of foam. Then, joining the other arm which has found its way from the snows of the Bjorns, it pours through the chasms in the lava, forming the Deep River (well deserving its name), in whose turbid waters no fish can live.

We stopped to lunch at mid-day, and on resuming our journey we disturbed several flocks of ptarmigan, which were feeding upon the little black Craig berries, here very numerous. We soon ascended the hills to the left, for it was no longer possible to get the horses over the lava; and now being on higher ground we beheld Vatna Jökull spread out before us, one vast white expanse, terminating in a rough glacier, coated with *névé* and black sandy moraine. The two Highgone Hills were now to the north-east, the first about four miles from the edge of the glacier, and the other some five miles farther to the north-east. They are black craters, penetrating the Jökull; but I could only judge of their nature through the telescope, having no time to give them further inspection.

Our way now lay over a series of quicksands, the horses sinking deeply into the unstable soil at every step, and sometimes entirely falling. On our descent we again found ourselves upon the lava, which here is buried very deeply in light volcanic dust, and appears much thinner than it is lower down. We reached the edge of the glacier about six P.M., being now to the N.E. of Kalfafell. At this point the glacier had brought down great quantities of obsidian and volcanic *débris*, some of which was apparently identical with specimens I afterwards found upon the Vatna, and also corresponded with others found by Mr. John Milne and myself near Groenafjall, farther to the east, in 1871.

Night was fast approaching, and there was no grass for the horses; so here we parted with Mr. Wynne, the farmer, and his servant. They wished us "God

speed," and I instructed my remaining companions in the art of British cheering, and, I dare say for the first time, Vatna Jökull rang with a good round hurrah! We had brought with us a large tent-cloth of thick canvas, and I had made a large bag of mackintosh sheeting, and rugs to sleep in, open at both ends. These, with two blankets, enabled us pretty well to defy the cold. We soon constructed the walls of our tent with the stones we found close at hand, and roofing it with our canvas speedily secured a very comfortable shelter. The lamp was soon alight and the soup boiling. By sundown all was quiet, and if any one could have peeped into our habitation they would have seen only two heads poking out at each end of the bag, and a few wreaths of tobacco-smoke curling gracefully up to the roof of our extemporized abode, finding exit through its various holes and chinks. As I knocked the tobacco ashes from my pipe, I could not refrain from putting aside the mackintosh coat which was suspended by way of door, to have a look at the chances for good weather on the morrow. The little glacial stream by which we were camped was now nearly dry; a cool frosty air stung one's nose and brought the water into one's eyes; a beautiful moon was rising, making the broad, white Jökull glisten with a pearly lustre; the dark waves of the lava stream looked more gloomy and forbidding than ever; the black crags of the Bjorns frowned upon the dark shadows they cast, and the lonely Highgone Hills, away upon the snow, seemed silently and sorrowfully to regard the frozen desolation with which they were surrounded.

We were astir by dawn, and ate the last *warm* meal we were to taste for some time. We then separated from the rest of our belongings the tent-cloth, rope, shovel, sleeping-bag, rugs, instruments, and poles, together with whisky and provisions for a fortnight, and the little Union Jack destined to adorn the summit of the Jökull. The sun as he rose was the only witness of the *cache* we made of the remainder of our things. We now commenced the ascent of the glacier, carrying everything upon our backs. It was impossible to think of hauling the sleigh over the rough surface of the glacier at this point, for the sand which the ice contained, even if the glacier had been smooth, would have soon worn the runners of a sleigh through, by the friction. I had hoped that the surface of the glacier would become clean

and smooth after a mile or so, as had been the case with the one which Mr. J. Milne and I had traversed near Groenafjall in 1871; but I was doomed to disappointment. After an hour's hard work of climbing with our heavy loads over the uneven surface, and dragging the unwieldy sleigh and the snow-shoes (which latter, although of no weight, were the most cumbersome part of our load), we were still surrounded by difficult and bewildering *aiguilles*, and hummocks of sand and ice, which seemed to increase around us. These obstructions rise to a great height where the largest quantity of sand occurs, and are, as is well known to all Alpine explorers, formed by the sand protecting the ice of which they are formed, from the rays of the sun.

But to return — we paused beneath an *aiguille*, higher than the rest, and it became evident not only that we all bore heavier burdens than it was possible to carry over ground of this nature at anything like the necessary pace, but that there seemed no likelihood of our being able to use the sleigh for many a mile. I therefore came to the conclusion that it was better to reduce our loads before we tired ourselves out by attempting to carry so much over such trying ground. We all agreed that tent, sleeping and climbing tackle, with instruments and provisions for a week, were all that four men could make forced marches with upon a Jökull.

We accordingly abandoned the remainder of our gear, but I carefully took bearings of the spot, and left a pole upon the top of the *aiguille* under which we had rested, to mark the place. I told my men that we must now travel twice as fast as we had intended to do, and promised them ten dollars each, in addition to their pay, if they reached the point of recent volcanic activity in the Vatna, or crossed the Jökull.

I made the things into two large packs of about seventy pounds each, so that two men could carry and two could rest, which is always the best way where speed is the chief object. Then serving out a dram all round, I carefully took our direction N.N.E., once more, and we proceeded at a much improved pace. There are but few crevasses in this part of the glacier, on account of the small angle at which it slopes. As we stopped to change burdens, for Biartny and John carried first, there was a great rumbling and gurgling in the glacier, which is often the case during the day, owing to the

escape of air or water liberated by thawing. I feared that my men, who had never before set foot upon a glacier, would be scared, but no such thing! Biartny merely remarked, "Now the Jökull is talking," and John tersely replied, "He speaks well." The men who were not carrying dragged the sleigh and snow-shoes; but the former became so utterly unmanageable amidst the rough *névé* and hummocks that we were obliged to abandon it, as we could improvise an excellent sleigh out of the snow-shoes. We left it three miles N.N.W. of the first of the Highgone Hills; so if it should ever be found, and the finder will carefully note the position, the rate at which these glaciers move may be approximated. One thing is certain, as regards this glacier; it *is* advancing, and possibly ebbs and flows in common with many other of the Icelandic Jökulls. This ebbing and flowing of course depends upon the ratio which the increment of frozen accumulation bears to the temperature throughout the year. Paul remarked that the Jökulls at this point had advanced some 200 yards since he had seen the glacier two years ago from the adjacent *fjald*.

The sun was now very hot, and the coagulated snow which covered the glacier upon which we were walking became very difficult, and we often broke through into pools of water. So before long I called a halt. We had made about seven miles in a straight line N.N.E. from the edge of the glacier, at the rate of about a mile and a half per hour; but as the nature of the ground had compelled us to make several *détours*, we had covered a considerably greater distance. We rigged up a shelter from the sun with our poles and canvas, and, after changing our foot-gear, lunched and slept, till the glacier was in better order for travelling. We started again about 6 P.M.; it was now much more practicable, and the surface of the snow was freezing, the wind N.N.E. After three hours we were able to pack our things upon the snow-shoes, which we joined together at the toes, leaving the ends to spread out and form a sort of sleigh, which was very light and travelled easily. We had left the true glacier behind us, and for a long while had been travelling over rough *névé*, which now developed into pure snow, consolidated by frost, having a crust upon the surface which was beginning to bear us. This mode of progression was much better than carrying the load upon our backs, as the Icelanders said, "*Mikit*

betr draga sem bara," which is English enough to be understood by any one, and is an example of the great affinity between our own language and the Icelandic. The ascent began to be more steep, for before it had been scarcely perceptible.

There was now a glorious sunset. The desolate fields of Skaptá and the black summit of Bleugre lay beneath us; on the west we were losing sight of Orefa all the more rapidly owing to the elevated nature of the Jökull to the east, but the last view of it can never be forgotten. Its snowy sides reflected an unearthly glow; the sky was perfect, scarcely a cloud was to be seen; and as the sun set, about 10 P.M., it was surrounded with a band of prismatic light, and, for hours after, fitful bands illuminated the western and northern sky, as is always the case in fine weather at the beginning of autumn.

The moon had risen, and a sharp frost had set in, stiffening our hair and beards. Just after nightfall is the clearest time upon the mountains in Iceland, and for this I looked anxiously in order to see whether there were any traces of smoke to the north. To those who have never looked for smoke in the distance, it may seem easy to distinguish between smoke and cloud, but it is a most difficult task. Again and again I could have said I saw columns of smoke rising, but the appearances soon proved to be only the light clouds of evening.

In this fashion we travelled on till midnight, when we dug a square hole in the snow, and roofed it with our canvas, heaping snow upon the edges to keep out draught. The two ends were fastened up with mackintosh coats, thus, as it were, having a housetop to cover the hole. We changed our shoes and stockings, hung them upon the ridgepole, and supped, sitting inside the bag, for it was bitterly cold, as we were now no longer moving; I lighted my pipe, and exposed my thermometer. I then examined my aneroid, and found our height to be four thousand feet above the sea-level.

Indescribably beautiful was that moonlight night upon the snow. Everything was seen in a strange blue radiance, like that of a Bengal light; there was no sound or motion to break the death-like calm. Crawling back into the warm bag, I finished the remainder of my pipe with my nose tucked under the rug. I made every man fill his flask with snow before he lay down, in order that he might have

some water in the morning, and thus we snatched three hours' rest.

In the morning my thermometer registered twenty degrees of frost, and our shoes and socks were frozen hard as a board. We had therefore to sit upon our foot-gear while we breakfasted before we could reduce them sufficiently to put them on.

It was a glorious morning. The snow no longer clung to our shoes, and the snow-shoes travelled easily over the firmly frozen crust. After a couple of hours' dragging we sighted a peculiarly-shaped mountain, about ten miles to the N.E. The summit was shaped like the end of a house, though at first sight it appeared like a black pyramid. The top was several hundred feet above the level of the surrounding snow. We named it "Vatna Jökull Husie," the house of Vatna Jökull.

Farther on to the north, and about two points off our course, lay a black-looking crater, and I made a *détour* in order to inspect it. It proved to be what I supposed. Cliffs of obsidian rock rose to the height of 150 feet, varying from a purely vitreous black obsidian to a grey stony variety. They enclosed a small crater breached towards the N.W., while they were surrounded from N.E. to S.W. by a gulf, about forty feet in depth, filled with water and frozen over, probably an ancient crater, in the centre of which the smaller one had been formed. The cliffs appeared to be constructed not so much from any violent eruption as by the welling out of lava which when first ejected, perhaps, displaced an immense amount of frozen material. The surface of the rocks was very brittle, and great quantities of fragments had been split away by the action of frost. The summit was principally black obsidian, numerous portions of which lined the sides of the cliffs; this overlay a more flinty variety, which passed into banded compact laminæ of semi-obsidian, almost a pearlite, at times containing large vesicles, which ran into one another; this again developed into a kind of grey stony obsidian. All these changes were apparently brought about by the different stages of cooling through which the lava passed.

We were now 4,500 feet above the sea-level. I named this mountain Mount Paul, after my valuable companion Paulson, who had been so energetic in procuring me men, and without whose aid I should have been sadly at a loss. We enjoyed a good draught of the water

which filled the outside crater, and, replenishing the whiskey-keg, set off up a steeper ascent due north, in order to allow for our deviation to the east. The great difficulty in acquiring anything like a knowledge of the geology of Vatna Jökull, is the depth at which the rocks are buried beneath the snow; and it is only in cases like that just mentioned, or where there may be considerable heat, that it would be possible to gather geological information. At the distance of about seven miles N.N.W. was apparently a similar crater, but it was more deeply imbedded in the snow. Upon the western horizon were twenty or thirty small black objects; but even through my glass I failed to detect whether they were clouds or black prominences. We journeyed on till we reached the height of 5,750 feet. The sun was very hot and travelling became exceedingly difficult. The thermometer in the sun rose to seventy degrees, and, as we had travelled about ten miles, with a *détour* of two, to examine Mount Paul, I called a halt, and proceeded to make a contrivance for melting snow. I scooped a hole in the snow, and lined it with a mackintosh coat. I then raised slanting banks of snow round the hole, which I covered in a similar manner, and strewed the whole with snow, leaving a good shovelful in the bottom of the hole. My companions had meanwhile raised a slant to protect us from the sun. I now ordered all wet socks and shoes to be changed and hung out to dry; if we had not taken this precaution we should have no dry change in camp. The men now slept, and I proceeded to post up my diary, and take observations.

To the east, about five miles off, lay a conical mountain, perhaps a continuation of Vatna Jökull Husie. I could see the black summits of Bleugre and the Bjorns, but we had long lost sight of Orefa. The Bjorns I knew to be S.S.W., and Bleugre S.W. Upon taking out my azimuth, great was my dismay at finding the first bearing N.W., and the latter due north, while my compass performed the most eccentric evolutions. I shut the instrument up in disgust, contemplating the chance of a fog, and cutting out a circle of paper, upon which I marked the known bearings of Bleugre and the Bjorns, I proceeded to take some observations, as far as it was practicable to do so, and drew as accurate a map of my route as I could under the circumstances. I determined to say nothing about my compass being at fault, lest my men might refuse to pro-

ceed; so taking refreshment at my reservoir, which was fast filling, I observed the bearings of the start, changed my socks, and turned in.

Having slept for four or five hours, we made a good meal, drinking plentifully of the pool of water which by this time had collected in our reservoir. All our things were dry, and we were in excellent spirits. As we ended our meal, a strong smell, as of the carbonic oxide from a blast-furnace just tapped, pervaded the atmosphere. We all started to our feet, and sniffed the breeze that was blowing pretty strongly from the N.N.E., which perhaps brought down the exhalation from cooling lava fields in that direction. I was now doubly sure we were upon the right track. At this moment Paul pulled out the little compass I had lent him, to observe more closely the direction of the smell: he at once detected the eccentric movement of the instrument, and exclaimed, "The compass is foolish!" Biartny and John at once turned round to witness the phenomenon, and, as I expected, asked, "What in case of fog?" I explained, (though, I must say, not very satisfactorily to myself) that it was only the part of the mountain we were then on that was attracting it, and asked if they were afraid. They laughed, and said, "Oh, no; it is all one to us." I carefully noted the direction of the attraction, which was to the west; that which ought to have been west reading north, though the compass would not hold steadily to any one point. The men called the mountain opposite to us Mount Magnet. It was now freezing, and, after advancing a short distance, all ascent terminated in a rolling plain of snow. In vain we searched the horizon for traces of smoke. The clouds deceived us; and even when, after looking through my telescope, I felt certain that I saw smoke, the quick glance of my companions would determine the doubt with the expression, "*Alla skyæ! ekki reykir*" (All sky, no smoke). We pursued our way for about three hours more, and passed a beautiful snowy peak to the east, a volcanic cone, covered with snow. The different stages by which it rose from base to summit told of the series of eruptions which had raised the peak to its present elevation above the surrounding snow, probably five hundred feet. Twice did the smell I have described come upon us, each time from the same direction. As the sun was setting we had a magnificent view of two white mountains, evidently

volcanoes, away to the east of these ; one was a two-coned mountain, while the other, a smaller one, appeared through the telescope to have a large cave in its side, from which was issuing steam or smoke. I should place them twelve or fifteen miles to the east of our track ; but, having lost sight of Orefa and Bjorns, I had nothing by which I could take their angular distance.

When the sun set, the surface of the snow became very hard, under the influence of a severe frost. Towards the middle of the night the sky clouded over, and as we were much fatigued we again camped as before in the snow 5,950 feet above sea-level, determining to rise with the light and make a long stage before the sun was up. We had been for some hours at about the same level, varying perhaps one hundred feet. At supper we reviewed the provisions, and found we had but three days' full rations left, for the severe work in the keen air had greatly increased our appetites. Upon examining my thermometers I found that the columns of both maximum and minimum were broken, and no amount of shaking would adjust them. This unfortunately prevented my obtaining any more thermometrical readings upon Vatna Jökull. We slept about four hours, and as it was not yet light in the tent, I tried to peep out, but found an accumulation of snow upon the mackintosh which formed the gable end of our housetop. When I succeeded in removing it sufficiently to look out, I found that a thick mist and fine driving snow prevented me from seeing many yards, and to my dismay the wind was S.E., the worst wind in Iceland. I slipped out, without disturbing my companions, and took a good look round. The shovel was nearly covered, only a small part of the handle showing ; so I stuck it up in our tracks, the blade bearing N. and S. After this, I returned to the bag and slept, trusting the wind might change ; but I knew it was hoping against hope, for when the wind once gets into S.E. in this country there is no knowing how long it will remain there. One thing is certain ; it will be the worst weather possible until it changes. When we all roused up from our sleep the snow was thickly falling, and as Biartny looked out he remarked, in scarcely a cheerful tone, "*Alla thoga miki dríva*" (All fog, much fine snow).

We held a council of war over our breakfast. The men were unanimous in their decision to turn back ; nor could I

(much as I should have liked to do so) have tried, with anything like an easy conscience, to persuade them to remain where we were, or to go on. We had scarcely a day's provisions left ; the wind was S.S.E., where it might stay for a fortnight, as I had often known to be the case ; the fine snow which was falling showed that there was a great deal more to come, for a heavy fall always begins with fine driving snow, and a passing storm with large flakes ; and I did not like the prismatic ring round the sun two nights previous. We were two good days' travel from the commencement of the glacier, our compass was useless, and, with the present weather, we might be a great deal longer trying to find our way down. I therefore determined to return. We made a good breakfast, duly anathematized the weather, and, having smoked a pipe, prepared to leave the English flag at this our farthest point of progress, which we believed to be about the centre of Vatna Jökull, though the highest point must be the summit of one of those mountains we saw away to the east. I took one of the poles, six feet long, and attached to it our small Union Jack ; then, forcing the point down into the snow, we raised a mound around it. I fastened to the pole a little bag, well-greased, containing a shilling and a penny, with a note, saying we four, W. L. Watts, Englishman, Paul Paulson, Biartny, and John, Icelanders, reached this point and planted this flagpost August 13, 1874, about thirty-six miles in a straight line from Nupstad, which bore S.S.W. three days' journey—adding a P.S. requesting the finder of the money "not to squander it in any of the adjacent shops." The bag was well bound round the pole. On this spot we left "Jack" to endure a lonely existence in the middle of Vatna Jökull, with a stanza of "God save the Queen" from me, and the Icelandic National Hymn of "Gamals Islands Folk" from my companions, the tunes of which are nearly identical. Regretting that circumstances compelled me to retreat for this year, I bade adieu to the flag of England, and sought the little trace that was left of our back-tracks. The tent-cover, and all that had been exposed to the storm, was covered with ice, which made our load much heavier, and I feared we should break the canvas when doubling up the roof that had sheltered us. Fortunately, the wind which most generally brings bad weather in Iceland is not a cold one, or life would

be imperilled at such an altitude. The newly-fallen snow made sleighing very heavy, and the exertion made the snow which fell upon us melt to such an extent that we were soon (in spite of water-proofs) very wet, for it is almost impossible to keep out fine driving snow. The wind blew steadily, but we were assisted by our back-tracks, which were remarkably distinct considering the amount of snow that had fallen. The wind, when travelling where it is unaffected by valleys or trees, is always a good guide, for there are characteristic winds to every country, with the feel of which the traveller soon becomes acquainted. In thick weather, without a compass, such knowledge is invaluable.

It takes a much longer time to obliterate tracks made in a hard crust than might be supposed, especially upon a slight incline, when it is freezing, and a wind blowing; the wind seems to blow the snow in and out again. Tracks made in the soft snow would not last anything like the same time. I have often remarked this in winter upon the plains of Northwest America, to which Vatna Jökull bears a close resemblance, especially where the prairies are rolling.

We took it in turns, one to find the way, two to pull, and one to hold the sleigh behind, and scoop away the snow, which from time to time accumulated in front of it. The ice thickened upon us, and upon the sleigh, making the one more heavy, and us less comfortable. After a long and hard pull we reached Mount Paul. My watch had long been broken; so I had left it behind, and now, not being able to see the sun, it was scarcely possible, with the thick darkness and fast-falling snow, to tell whether it was night or day.

We descended into the crater for shelter, and, breaking away the ice which had accumulated about our neckwraps and hair, we partook of a good meal, and I again examined the curious rocks around me, while my companions filled the flasks with water, and "fixed up" preparatory to another start. The next stage brought us to our snow house of two days back, but we should not have discovered it had we not most fortunately and unexpectedly hit upon our back-tracks again within half a mile from this spot. I never felt more thankful for anything, than I did to find I should not have to stand about for an hour in my frozen garments amid such a tempest while we fixed a shelter.

We soon established ourselves, and,

having changed our socks, got into the bag, and discussed our meal. As we were all wet and cold, I started Icelandic songs, and we spent some time in shouting ourselves hoarse. Making a noise is a very good thing to warm one, especially in a bag like that in which my nose was buried. Thus solaced by a short pipe I fell asleep, while the rapidly increasing darkness showed that either it was growing late or we were getting snowed up.

After a good sleep, I awoke with something pressing heavily upon my face, and I found that the snow was weighing the canvas down upon us, for we were now using rope as a ridgepole, having left the long pole we had before used with the flag. When we looked out the winds had shifted more to the east, and if we had had a sufficient stock of provisions I should not even then have thought of turning back, but, under the circumstances, nothing else could be done. Our shoes and socks were frozen hard again, although we had lain upon them, and we had to put them in our bosoms to thaw them out. Biartny was the first to get his on; he crawled out, leaving a hole through which the snow drifted in a most merciless manner. The house was becoming untenable, and we were soon all outside, steaming as though we had been dipped in hot water; but our clothes were soon frozen to our backs. We cleared the snow away, and dug out our things. The cold was intense, for now the wind had shifted from the south, and when that is the case the temperature falls very low during bad weather upon these Jökulls.

It took a long while before we felt at all warm, but in due time the exertion of travelling overcame our icy coating. The wind, being colder, made the surface of the snow in much better condition than it had been on the previous day, and we made very good progress; moreover, the men were *going home*.

We travelled hard for many hours, keeping the wind upon our left; and, taking turns in pulling as before, we reached the termination of the snow, which struck the glacier about four miles west of the first of the Highgone Hills. We were soon obliged to have recourse to our former fashion of carrying our things upon our backs, and after a somewhat dangerous walk, owing to the recently fallen snow, we arrived at the *ffjald*, where we had "cached" our superfluous luggage. Light was on the wane, so we cooked some soup, which was very grate-

ful. We were wet through; and as by fording the Dipou at this point we could make a short cut over the Bjorns to Nupstad, we determined to proceed, instead of passing the night upon the *fjalds*. My men well knew the way, for they are at home amongst the rocks, where they keep their sheep, though they had never before set foot upon a Jökull. We left all our things behind, and raced one another over the lava to the Dipou, which we forded, holding one another round the waist, to prevent being swept away; for although it was late in the afternoon, and cold weather withal, there was sufficient water still flowing from the glacier to take us up to our waists. We reached Nupstad before darkness set in, and found Mr. Wynne awaiting us, with our guide from Rejkavich, who had returned with a fresh supply of provisions, &c. With the farmer and his family they gave us a hearty welcome.

In reviewing my trip, as to the light it throws upon the nature of the Vatna, I arrive at the conclusion that the eruptions of last year are neither from the south slope, nor from the centre of Vatna Jökull, and that they are therefore, doubtless, a volcano like those I have mentioned, many of which, in all probability, penetrate the northern as well as the southern slope. From cross-bearings which I took of the direction of the eruption as seen from various parts of the island, I should place the volcano from which the eruption came, upon the northern slope of the Vatna Jökull, in a line south of Modrudalr in the north of Iceland, not far from the supposed source of the Jökulsa of the north, and I mean to direct my next effort towards that spot.

In order properly to explore Vatna Jökull, it is necessary that the party should consist of not less than eight persons, with two sleighs that will carry from one hundred and fifty to two hundred pounds each; for, although that is too much to journey with on a glacier, it can be easily carried on the snow. The allowance of provisions should be 1 1-2 lb. of meat, 1-2 lb. of butter, 1 lb. of bread, 1-2 oz. of sugar, and 1-4 pint of whiskey per man per day. All should sleep in a huge bag made of thick mackintosh, and blanketing and a cork mattress should also be added large enough to floor the house, with a margin of thin oil-skin, that might peg into the walls, to prevent the back getting wet, when leaning against the sides. Two buffalo-skins, or a large eider-down quilt, would also be of service; otherwise

there should be a spare rug for each man. More important than all, is some good method of melting snow without the use of spirit-lamps. A good tent eight feet by eight, and four feet high, and two stout iron shovels are indispensable. For clothing, nothing is better than strong tweed knickerbockers, worsted drawers, knitted jerseys, and pilot coat, with knitted socks and *Indian mocassins*; these last are a *sine quâ non*. English boots are out of the question for snow-travelling, and the Icelandic shoes, though better than English boots, require tops to be sewn on them. Snow-shoes for those who can use them are a great assistance.

To sum up, this hitherto untrodden Vatna Jökull is a mountainous tract surrounded by a rolling plateau, containing numerous volcanoes, one of which (if not more), upon the north, appears to be in a state of pretty constant activity, while numerous others in all probability are paroxysmal, most likely exhibiting all the phenomena characteristic of (if I may be allowed the term) *bottled-up volcanoes*. This tract, together with the Odathabraun, and the centre of Iceland with its numerous mountains, forms a volume of nature, the first leaf of which has only just been cut; and beyond doubt there is a constantly active volcano within a thousand miles of our own shores, upon which the eye of man has never rested.

The investigation of this land is an expensive affair to attempt single-handed. Are there three men in England—who do not mind roughing it, and who understand what they are going in for—that will join me in the undertaking? If there are, and they will communicate with me, we may—with the assistance of four Icelanders, next year search these unknown wonders from end to end.

W. L. WATTS.

From The Spectator.

THE LIFE OF THE PRINCE CONSORT.*

MR. THEODORE MARTIN was entrusted by her Majesty with the task of writing the life of the prince consort, and the first portion of the work—the life of the prince from childhood to 1848—has been completed, has been given to the public, and excites a strong and justifi-

* *The Life of H.R.H. the Prince Consort.* By Theodore Martin. Vol. I. London: Smith, Elder, and Co. 1875.

able hope that the next portion will fill a volume of most unusual interest. The first portion, a few pages towards the close excepted, does not. Mr. Martin has in many respects performed his task exceptionally well. He writes with dignity and grace, he values his subject, and treats him with a certain courtly reverence, yet never once sinks into the panegyrist, and while apparently most frank—so frank, that the reticent English people may feel the intimacy of his domestic narratives almost painful—he is never once betrayed into a momentary indiscretion. The almost idyllic beauty of the relation between the prince consort and the queen comes out as fully as in all previous histories of that relation,—and we have now had three,—as does also a good deal of evidence as to the queen's own character, hitherto always kept down and, as it were, self-effaced in publications written or sanctioned by herself; but Mr. Martin has either been reluctant to use, or failed to use, the great mass of material in his hands for the elucidation of the inner character of the prince. The stream of the narrative flows on unbrokenly. We see something of the child at Rosenau, with his abiding love for his elder brother, his habit of study, and his self-restrained, cautious, and high-purposed temperament; we read long extracts from the queen's *Journal*, and whole masses of Baron Stockmar's letters, most of them lectures somewhat in the Sandford-and-Merton style, their pedagogic tone relieved only by their courage in advice or admonition; but of Prince Albert as a man, an individual with separate tastes, habits, and ways of thought we see, till the end of the long, and we fear we must add, somewhat tedious volume, next to nothing, or at all events, nothing to be considered in any degree new. We perceive that he was fond of his brother; that he was penetrated through life by the idea of duty; that he had a full sense of his responsibility as virtual king consort, that his position, at first an irksome and hampered one, was gradually made easy to him by his complete conquest of his wife—one may say this, for the queen herself says it much more energetically and frankly than we do—and that though a bold rider, he was by nature a melancholy, low-strung man, with a feeble pulse, prompt at the call of duty, but inclined to weariness of duty; given by taste to art-studies, to country solitude, and to reflection on somewhat abstract politics;

—we see all this, but of the intellectual man, of his opinions, or purposes, even of his artistic character, we see, till the end of the volume, far too little. No one with any idea of Prince Albert will gain from the first three-fourths of this volume any further idea of his personality, unless, indeed, it be from the fact that it gradually inspired most English statesmen—the exception seems to have been Lord Palmerston, though that is never clearly stated—with a very unusual confidence and regard. That Prince Albert did in some way win this regard is now certain, and that he won it by his capacity and character may be taken as fully proved; but of the way in which he showed this capacity we have in the first portion of the *Life* little evidence, less than in Baron Stockmar's book, where the prince's plan for reforming the preposterous abuses in the royal household is given much more clearly and ably than in this, which adds to that account only the name of the *gouvernante* with whom it was, years before the reform was fully accomplished, necessary for the prince to contend:—

A mistake, it was soon found, had also been committed in not establishing the prince from the first as private secretary of the queen, and placing the internal arrangements of the royal household under his immediate control. These functions had, since the queen's accession, been to a great extent discharged by the Baroness Lehzen, her Majesty's former governess, and they invested her with powers which, however discreetly used, were calculated to bring her into collision with the natural head of the household. It is due to this lady to say, that genuine affection for her Majesty, who for so many years had been the object of her care, and who was attached to her by ties of gratitude and regard for kindness and counsel in her girlhood, when they were most needed, very probably blinded her to the obvious truths, that her former influence must, in the natural course of things, give way before that of a husband, especially of a husband so able and so deeply loved, and that, in the true interests of her royal pupil, she should herself have been the first to desire that the offices she had hitherto filled should be transferred to the prince. The painful situation in which he found himself through this not having been done is indicated by a passage, quoted in *The Early Years*, from one of his letters to Prince von Löwenstein so early as May, 1840:—"In my home-life I am very happy and contented; but the difficulty in filling my place with the proper dignity is, that I am only the husband, and not the master in the house."

We weary a little, we confess, of the

court records, of journeys, and visits, and readings, and long for evidence to prove, what we have always maintained, that Prince Albert was something besides the husband and lover of the queen, — a singularly thoughtful and studious politician.

There is some evidence, however, on this point in the volume before us. There is no question in English politics so difficult or so much debated as the position which England should assume in Europe if she intervenes at all in Continental affairs, and none upon which the prince consort has given so clear, or in our judgment so wisely moderate an opinion. This letter, addressed to Lord John Russell on September 5, 1847, is the letter of a statesman, and a statesman of the first class : —

Our policy towards Italy has hitherto been a passive or negative one, on general principles of European policy, preferring Austrian supremacy to French supremacy. We now enter upon an independent line, and one which will not admit of our remaining passive any longer. It is therefore desirable that the first step, which will give the impulse and direction to the rest for times to come, should be the right one; I mean one based upon the principles of justice and moderation, and intelligible to all Europe. I think further, that *this* is the right moment and opportunity for correcting a great many misapprehensions existing about the object of English policy in general, and of setting this in its true light before the world as an explanation of the past, and a declaration for the future which will enable all governments and nations to understand what they have to expect from us. My notion is this : — England has, by her own energies and the fortunate circumstances in which she has been placed, acquired a start in civilization, liberty, and prosperity over all other countries. Her popular institutions are most developed and perfected, and she has run through a development which the other countries will yet in succession have to pass through. England's mission, duty, and interest is, to put herself at the head of the diffusion of civilization, and the attainment of liberty. Let her mode of acting, however, be that of fostering and protecting every effort made by a State to advance in that direction, but not of pressing upon any State an advance which is not the result of its own impulse. Civilization and liberal institutions must be of organic growth, and of national development, if they are to prosper and lead to the happiness of a people. Any stage in that development missed, any jump made in it, is sure to lead to confusion, and to retard that very development which we desire. Institutions not answering the state of society for which they are intended *must work ill*, even if these

institutions should be better than the state that society is in. Let England, therefore, be careful (in her zeal for progress) not to push any nation beyond its own march, and not to *impose* upon any nation what that nation does not itself *produce*; but let her declare herself the protector and friend of all States engaged in progress, and let them acquire that confidence in England, that she will, if necessary, defend them at her own risk and expense. This will give her the most powerful moral position that any country ever maintained.

The prince held this opinion, be it remembered, not as a mere counsel of perfection, but as one on which England should be prepared to act, and wrote on August 29, 1847, when Austria was threatening Italy with occupation, these words to Lord John Russell : —

What is it we apprehend? That Austria might be tempted to commit an open assault upon her neighbour, in order to prevent her carrying out her political changes, should advice and remonstrance not succeed in stopping them. Is it the right remedy on our part for preventing this palpable breach of the laws of nations and the complications arising out of it, to urge the pope to defy Austria, and not to let himself be intimidated? Or will it not be more to the purpose, and certainly more honest and friendly, to address ourselves to her, and to say : — "We have no hand in what is going on in Italy; though we think the Italians are acting wisely, we have not lent them any assistance. But we consider that every independent State has a perfect right to manage its own internal affairs, and that if sovereign and people in a State are united in their determination to introduce certain reforms, and another State attempts an armed invasion to stop these reforms, merely because it considers them dangerous to the maintenance of its own established system of government, we shall look upon that act as an act of aggression upon the independence of the other State, which Europe and the Powers who signed the Treaty of Vienna cannot look upon with indifference."

Nor can we agree with the popular judgment on the prince's plan for the revival of Germany. He drew up in 1847 a memorandum for submission to the king of Prussia, which lacked merit only in this, that he had underrated the pride and obstinacy of the reigning German houses. He advised that every German prince should grant a Constitution — advice fulfilled last week by the vote of the Reichstag, compelling the Mecklenburg dynasty, the only absolute one, to establish a Parliament — that Austria, if she could not be expelled from the Bund, should be neutralized within it; and that a Parliament should be called at Frank-

fort, with control over commerce and inter-State affairs and foreign affairs, and with the charge of slowly building up a central administration — advice which, if we substitute Berlin for Frankfort, and Bismarck *plus* Parliament for Parliament alone, has been exactly followed. The prince's idea did not approve itself to Stockmar, who had not seen the memorandum, and who had, like all men deep in the confidence of kings, a contempt and hatred for the caste, though he loved individuals in it; but the correspondence brings out perhaps the finest trait yet observed in the character of the prince consort. He was supposed, while alive, to be very tenacious of etiquette, and somewhat frigid in his intercourse with inferiors; and Mr. Martin hints that he was a little wanting in personal attention to those about him, especially towards women of high rank. But when he was sure of his correspondent's good faith he could stand advice. The Earl of Portland never was ruder to William III. than Baron Stockmar was on this occasion to his "beloved prince," whom he told, without circumlocution, that he knew nothing about the matter, and that he was too much of a prince to understand it, and with some circumlocution that the German people wanted to be rid of their dynasties: —

The question arises, Does your Royal Highness possess the requisite knowledge for dealing with the subject thoroughly and to purpose; and also such a standing-point as will enable you to give a practical application to your theoretical views? To speak frankly, I feel bound to answer both these questions in the negative. You left the Fatherland eight years since, and when you were very young. How could you have gained a thorough insight into things as they are, or into the country's present and immediately pressing wants? The bare possibility of such knowledge was denied you; and conversations with Prince Charles (Leiningen) could furnish you with only very limited, and probably very one-sided results. Not that, in my doubts as to your qualifications for this task, I am likely to overlook the fact that, with the great advances you have already made in the knowledge of the general political condition of Europe, you would be in a position to form a correct judgment on German affairs both at home and abroad (for my opinion is precisely the reverse). All I doubt is the existence of an intimate knowledge of these affairs, while at the same time I dread your committing the mistake, which you might easily do, of applying to Germany the standard (a just one, in its place) with which your intimate acquaintance with Anglo-European relations has made

you familiar, without due regard to the peculiar characteristics of the German people. With this doubt as to your proper qualification, on the score of intimate knowledge of the facts, goes the further apprehension that the standing-point which, as a German prince, you cannot fail to adopt in considering it, will present the subject to you in a cross-light, and thereby lead you to distorted views and conclusions. In dealing with the German question, your Royal Highness can scarcely look at it from any other point of view than that of a German prince; and, however acute and accurate your observation of all details may be, still they cannot possibly be seen by you but in the colours of German dynastic interests. And it is just this colouring which makes me believe it improbable your Royal Highness should rightly grasp and appreciate the actual present condition and wants of the German people; and still less that you are able to frame any practicable scheme which will meet the exigencies of the case.

The prince sent back a reply cordially thanking the baron for his letter, and acknowledging "the weight of his reasons as to his own [the prince's] qualifications for calling such a plan into existence," and requested Herr Bunsen, then Prussian ambassador, to recall the courier who carried the memorandum. The request arrived too late, but the fact that it was made is conclusive evidence of the prince's readiness to consider advice, even when offered in the frankest, not to say the bluntest possible tone. We expect fortitude of that kind in premiers, but not in princes. The following will be less clearly understood, but it shows great breadth of view. The reigning Grand Duke of Coburg had complained of his peasantry for marking their liberation by giving up their distinctive costume, and the prince writes: —

My uncle is right in his regret that Radical tendencies and modern reforms bring all things to one level (*alles nivelliren*), destroy much national and local individuality, mould everything upon one last (*alles über einen Leist schlagen*), and thereby prepare the way for French absorption, against which a national character is the strongest safeguard. But he forgets that epochs have a physiognomy, as well as countries and peoples, and that the transition from one epoch to another, though it may destroy what we formerly regarded as individual and essential, does not at the same time necessarily destroy nationality. It is so even with the matter of dress. The alteration of the Coburg peasant's dress (the men's, for example,) will seem, as far as feelings go, to be a decline of individuality, but what gave that costume individuality was only the fact, that it dates from the last century; then, how-

ever, it was *universal*, and simply a copy of the dress of the upper classes, and this dress of the upper classes is what the peasantry of the present day are bent on assuming *at once*.

There is great keenness and a good deal of *bonhomie* and humour in the prince's sketch of the late king of Prussia, the weak prince who rejected the crown of Germany offered him at Frankfurt:—

The king lets himself be misled by similes which captivate his fancy, which he carries out only so far as they suit his purpose, and which frequently by no means reflect the true state of things, but satisfy because they are clever and suggestive (*geistreich*). This makes close discussion with him impossible. . . . Then the king runs another risk in this, that he adopts *subjective feelings* and opinions as the motive principle of his actions, and then not only acts upon them, but also desires that, as these feelings and opinions are dear and sacred to him, they should be the same to everybody else, no matter whether they are not even affected by them in the slightest degree or not, nay, although to carry them into effect would operate a probable injustice. To this class belong those feelings of piety towards the late king, which only the son can feel, and those favourite maxims, which have a special truth for *him*, springing as they do out of certain favourite studies and lines of thought. Herein is to be found the key to his strange address from the throne. It is a purely subjective, Brandenburg, Hohenzollern, Frederick-Wilhelmish opinion.

His religious belief is not so distinctly outlined as it must be whenever a complete history of the prince's life comes to be written, but it is evident that the prince was a Broad Churchman of the Hampden type; that bigotry was the one thing which made him bitter; that he disbelieved in the utility of dogma, but that he did not, as so many Germans do, replace it by a mere religion of goodness. His faith appears to have been—subject always to further revelations—that the religious emotion is essential to elicit the only true cult, that of goodness based upon the persistent sacrifice of self.

It is curious to trace in these letters perhaps the first authentic hints the British public has yet had of the character of the queen, which, except as regards her domestic affections, is not known, as it will be one day, to the bulk of her people. The terrible explosion of the year 1848 overwhelmed the prince, and found the queen just recovering from a confinement, yet her Majesty writes on April 4, 1848, to King Leopold of Belgium, a curious little morsel of self-criticism. "From the first I heard all that passed; and my only

thoughts and talk were politics. But I never was calmer and quieter or less nervous. Great events make me calm; it is only trifles that irritate my nerves." There is keenness too, and a trace of sub-humour in the queen's sketches of the Emperor Nicholas of Russia, who seems to have been nearly as formidable a personage to her Majesty as to the majority of mankind:—

I will now (having told all that has passed) give you my opinions and feelings on the subject, which I may say are Albert's also. I was extremely against the visit, fearing the *gêne* and bustle, and even at first I did not feel at all to like it; but by living in the same house together quietly and unrestrainedly (and this Albert, and with great truth, says, is the great advantage of these visits, that I not only *see* these great people, but *know* them), I got to know the emperor and he to know me. There is much about him which I cannot help liking, and I think his character is one which should be understood, and looked upon for once as it is. He is stern and severe, with strict principles of *duty* which nothing on earth will make him change. Very clever I do not think him, and his mind is not a cultivated one. His education has been neglected. Politics and military concerns are the only things he takes great interest in; the arts and all softer occupations he does not care for; but he is sincere, I am certain—sincere even in his most despotical acts—from a sense that it is the only way to govern. He is not, I am sure, aware of the dreadful cases of individual misery which he so often causes; for I can see, by various instances, that he is kept in utter ignorance of many things which his people carry out in most corrupt ways, while he thinks he is extremely just. He thinks of general measures, but does not look into details; and I am sure much never reaches his ears, and, as you observe, how can it? . . . He is not happy, and that melancholy which is visible in the countenance made us sad at times. ["I don't know why," says her Majesty's *Journal*, "but I can't help pitying him; I think his immense power weighs heavily on his head."] The sternness of the eyes goes very much off when you know him, and changes according to his being put out (and he can be much embarrassed) or not, and also from his being heated, as he suffers from congestion in the head. He never takes a drop of wine, and eats extremely little. Albert thinks he is a man inclined to give way too much to impulse and feeling, which makes him act wrongly often. His admiration for beauty is very great. . . . But he remains very faithful to those he admired twenty-eight years ago.

Elsewhere her Majesty says that the anxiety of the emperor to be believed was "very great," an anxiety habitual with

men so *rusés*, and comments on his eyes, which had a trick of showing the whites, and were anything but the "mild eyes" which took in poor Mr. Sturges and the Quaker deputation. And, finally, even if the queen did not herself entirely frame her letter to the queen of the Belgians, daughter of Louis Philippe, upon the Spanish marriages, her acceptance of its tenor is no slight evidence of mature political judgment. The king of the French had broken his word, personally pledged to her Majesty, and his daughter, of course, sought to explain away his perfidy. The queen replied on 27th September, 1846, eighteen months before the fall of the royal intrigant, in terms of which the cool *hauteur* and even menace will not escape attention:—

My dear Louise, — I have read and re-read with the greatest attention the king's explanation of the recent events, and his statement of the motives which have governed the course of the French government in regard to this unhappy Spanish affair, and I am deeply pained to have to declare that the perusal of his letter has in no way altered the opinion which I had previously formed, nor the pain I feel that these events should have occurred to trouble our cordial understanding — an understanding which was so useful and so precious. . . . The one simple fact which governs this whole affair, is that the king declared that he would not give one of his sons to the queen of Spain, and that on this declaration he based the right to limit the queen's choice to the family of the Bourbons descendants of Philip V. We disputed and denied this right; still we consented to the choice being so restricted, and even promised to recommend it to Spain; and to this we have most scrupulously and religiously adhered, without swerving one hair's-breadth. What the king desired has taken place; the queen married a descendant of Philip V., and of his descendants just that one whom he knew we regarded as the least eligible. The same day the king gives his son to the heiress presumptive to the crown, not only without previous concert with us, but contrary to the pledge which he gave me at Eu last autumn, when with the question of the marriage of the queen he for the first time mixed up that of the marriage of the Infanta. This pledge was, "that he would not think of this marriage, so long as it was a political question, and not until the queen was married and *had children*." . . . "I have, then, thoroughly considered the whole matter by myself, and looking at it with no eyes but my own, and I cannot possibly admit that the king is released from his pledge. Nothing more painful could possibly have befallen me than this unhappy difference, both because it has a character so personal and because it imposes upon me the duty of opposing the

marriage of a prince, for whom, as well as for all his family, I entertain so warm a friendship. My only consolation is, that as what is proposed cannot be carried out without producing grave complications, and without even exposing to many dangers a family whom I hold in high regard, they may even yet retrace their steps, before it is too late."

Everything in this volume tends to raise the character of the prince, and if in the next Mr. Martin will be a little less and a little more reticent — will give us more of the prince's mind and less of his domestic affections — he will make of the whole what the queen desires, a monument of her husband which will help to secure him in English history a place that cannot be finally secured until that place has been scanned, as it never has been yet, by an inexorably just, but nevertheless slightly hostile eye. Mr. Martin says, and we fully believe, that such an eye would discover nothing to the prince's discredit, but at least it would ascertain why up to the hour of his death the prince was so deeply distrusted not only by the English aristocracy — which was merely offended by a pride of caste visible even to Baron Stockmar — but by the masses of the English people, who, as they show in the case of the Princess of Wales, are not instinctively hostile to the "foreigner." Was the cause mere insularity, or was it, as in the case of William III., a well-founded suspicion that the man who served them so well never loved or liked them, that outside his own household, his heart was with his own people, that Windsor was no more a compensation for Rosenau than it had been for Loo, and that everything except the welfare of England was subordinate to a desire for the prosperity of the House of Coburg? It would be no discredit to the prince if such were the case, for there can be no question of his utter fidelity to England, but it would explain much that has always puzzled those who, like ourselves, hold him to have been the greatest, except William III., acquisition ever made by the British Court.

From The Saturday Review.

ADVICE TO YOUNG HOUSEWIVES.

WE read the other day in the *Queen* an article entitled "Advice to Young Housewives," so excellent in intention, but likely, as we fear, to be so disastrous

in effect, that it is worth while to show the ill consequences which may be expected to follow if the advice in question is taken. The article starts from the assumption that marriage may be something more than a dreary routine, that some gleams of colour may be introduced into the dull grey of daily life, and that whether this is done or not depends mainly on women. It is their fault for the most part if the husband soon forgets that he was ever a lover. It is because the household is stupidly managed, the drawing-room tasteless, the dinner badly cooked, the wife listless and incapable. Upon all these points the writer has suggestions to offer. With some of these there is no need to find any fault. They are either general enough to be safe or trifling enough to be harmless. No mischief can come of the maxim never to "let your husband see you in any unbecoming or ungraceful dishabille," or of the information that a black net, "prettily made and worn with coloured ribbons," is an economical dress to wear every evening. The advice to study variety of ribbons and ornaments, "that your husband may always have some fresh trifle to notice in your toilet," is more open to question. If the husband has a keen eye for distinctions of colour or material all may go well. He will not forget to notice to-day that the ribbon is pink and plain, to-morrow that it is mauve and watered. It will be a constant subject of interesting speculation with him whether his wife will come down to dinner with an enamel cross or a gold locket on her neck. But, supposing that his interest in these details flags, that the wife is always giving him trifles to notice, and he always forgetting to notice them, is there not cause to fear that she may resent his indifference far more keenly than if she had never tried to charm him out of it? Generally speaking, indeed, it is in the details that this writer seems to go wrong. Thus there is some perfectly sensible advice about not forcing confidence, not letting familiarity banish courtesy, nor returning rudeness for rudeness. A wife is warned not to say to her husband, "Do you love me?" lest it should bore him. She is to try to behave so that he shall say to her "Do you love me?" How this question is to be answered might well have been left to a woman's own instinct. There is no need to put into her mouth the words "Of course not, why should I?" with the stage direction that this little speech is

to be accompanied with a smile "which shall show him that you do not quite mean what you say." We fear that on experiment this plan will be found quite as likely to bore a husband as the direct interrogative which is wisely forbidden. A wife may find it more difficult to vary her smiles than to vary her ribbons, and the weariness produced by sameness of expression may be more serious in its consequences than the weariness produced by sameness of personal decoration.

The points upon which the writer lays most stress are the arrangements of the house, especially of the drawing-room, and the wife's choice of subjects for conversation. As regards the first, not comfort only, but "all the graces and prettinesses of life," are to be cared for. An imaginary objection, that the graces of life are expensive is disposed of by the remark that in most ugly houses it is not money that is wanting, but "thought, care, and talent on the part of the mistress." This is a very comfortable doctrine for the young housewife who has no spare coin in her purse. If she has not yet furnished her house there is better news still in store for her. Artistic furniture, she is told, can be procured quite as cheaply as "hideously 'elegant articles,' " only of course she must educate her taste so as to know what is artistic and what is hideous. This is easily done. Pay "a good many visits to the South Kensington Museum, and you will then be able to make your rooms very different from those of an ordinary English house." The young housewife who sets to work to put this direction into practice is sincerely to be pitied. The collection of furniture at South Kensington contains plenty of materials for educating the taste, but it is as rich in warnings as it is in examples, and a woman who plunges into it without a guide may easily confound the two. Then the labels usually state the price that has been given for each piece, and a novice who tries to calculate what she must give for a cabinet or a table by comparing the cost of one which has been bought at the sale of a famous collection with the cost of another which has been picked up a bargain in a back street in a foreign town, will find herself in a state of embarrassing uncertainty whether or not to believe the dealer at whose shop she looks in on her way home. On the whole, she is most likely to find refuge in Wardour Street. There she will find

no difficulty in filling her rooms with old oak, just out of the manufacturer's hands, and eighteenth-century marquetry, inlaid to order yesterday. In this way she may easily succeed in making her rooms very different from those of an ordinary English house. Unfortunately, if the education of her taste goes on, a time is sure to come when her one desire will be to see her rooms something very different from what she has made them. Even if the furniture is already bought, the young housewife is bidden not to despair. She must make her drawing-room as pretty as she can, and, above all, she must make it the living expression of herself. Everywhere there are to be signs of occupation. The writing-table must display "its pretty knickknacks," a brightly-coloured skein of wool is to peer out of the work-basket, and the tables must be strewn "with novels, periodicals, *brochures*, and books of poetry." It is a little neglectful of the writer not to have supplied a list of appropriate "*brochures*." Novels, magazines, and even poetry, the young housewife may be able to compass, but we suspect that her notion of a "*brochure*" will hardly go beyond the price-list of a co-operative store. If she has not ruined her husband with bills for artistic furniture, she has still a chance left her of ruining him at the nurseryman's and the print-shop. The flower-vases are never to be left empty, because even in London flowers "can be procured at a small expense, growing in pots, or freshly gathered." Next she is told to avoid the cold look of uncovered walls by having "plenty of *good* water-colour engravings or photographs." It is true there is a saving clause, "if you can procure them;" and it may be hoped that young housewives will understand this to mean "if you have money to pay the bill for them when they are sent home." Even then the advice has its dangers. Good photographs are cheap enough, but a wall rashly covered with photographs chosen at random by a young lady whose taste down to the time of her marriage has been chiefly developed by the study of her friends' photographic albums may soon drive the husband to regretting the despised wall-paper. By that time, however, the mischief will be done. Nails will have been driven in in every direction, and the advice to hide as much as possible of the wall-paper may have to be strictly followed because there is so little of it left fit to be seen. In that case the drawing-room will hardly "be a real

pleasure to your husband to enter," even if to the wife herself it should be "redolent of a certain mysterious charm."

Considering the financial catastrophe which by this time is probably impending, it is prudent perhaps to tell the young housewife never to talk to her husband about domestic economy. He may, as the writer forebodes, "be too much inclined to fidget about details," and for the present, at all events, "be the better for being led to think of other subjects." "Trifling gossip" is not, however, absolutely prohibited between husband and wife. He is allowed to interest himself in "baby's new tooth, the purchase of a piano or a carriage, or my sister's engagement." There is something highly ingenious in the way in which an outlay of fifty or a hundred pounds is slipped in sandwich-fashion between two subjects so little exciting to a man as a first tooth and a family love-affair. But gossip is not to form the staple of a wife's talk. She is to make herself a companion of her husband's mind, and to this end she must set before herself two solemn duties. The first is to read the newspaper every day — "not the fashionable intelligence, but the political information." The young housewife must not expect to like this at first, but if she perseveres she will reap the double reward of interesting her husband and being interested herself. She will soon "discuss eagerly the chances of Empire or Republic in France, or the passing of any important Bill in Parliament." It is paying a great but, we fear, an undeserved, compliment to the superior sex thus to take for granted the man's interest in these subjects. What is a young housewife to do if, after she has qualified herself to discuss the chances of Empire or Republic in France, she finds that she has to instruct her husband as well as to converse with him? If she does not feel able to do this, she had better make sure what it is in the newspaper that her husband reads. It would be vexatious if it were to turn out, after she had got up the political information diligently for a month, that the only part that her husband knows anything about is the sporting intelligence or the city article. It is the more important that she should not waste any time upon unnecessary work because the improvement of her mind is not over when she has read the newspaper. She is also to read as a matter of duty "some one *good* periodical, such as the *Edinburgh, Quarterly*, or *Fortnightly*." This,

it is promised, will keep her "*au courant*" of the opinions, controversies, and discoveries of the age." Here again the advice stands in need of some qualification. What if the young housewife chooses the *Fortnightly*, and retails the opinions and discoveries she there meets with to a husband who alike in politics and in theology is a staunch Conservative? No doubt there will be no stagnation in the household, but we fear that peace will hardly brood over the moving waters. The husband may resent being told that he was once a lump of protoplasm, or that even now he is only an automaton. Or, supposing the tables to be turned, it is quite possible that a husband who takes his belief from "*Literature and Dogma*" may be inclined to snub a wife who retails as her own the opinion expressed in the *Quarterly* article on "*Modern Culture*." Perhaps, however, if the young housewife has thoroughly learnt her lesson, her husband will be glad to accept any opinions she may give him at secondhand, as at all events an agreeable change from the opinions she is bidden to form for herself. Married women are bidden to

"wage a never-ceasing war," to "speak with a never-ending protest," against cruelty and oppression; the reason being that "all through the world arises the cry of suffering humanity," and great nations "groan and travail in cruel wars and terrible convulsions." It seems a little hard that the husband who is not responsible for these wars and convulsions should be condemned to listen to a never-ending protest against them. Of the two, Mr. Ruskin's suggestion that all the ladies of Europe should wear mourning in time of war seems the less unpleasant. We have heard of a lady who went up-stairs and sat in the cold rather than remain in the room with an old friend who took the wrong side in the French and German war, and if young housewives can persuade themselves to be satisfied with a silent protest, we commend this mode of offering it to their best attention. It will at least save husbands, when their wives lament that they cannot themselves "fight in the arena of the world," from being tempted to reply, "I heartily wish you could; I might then have peace at home."

THE ash of the better coals of the American carboniferous age appears to be derived wholly from the plants which formed them. According to analyses by many chemists (quoted by Prof. Dana, in the last edition of his "*Geology*"), made on lycopods, ferns, equisetæ, mosses, conifera, &c., there is in them an average quantity of silica and alumina, such that if the plants were converted into coal it would amount to 4 per cent. of the whole, and the whole ash would be 4.75. Many analyses of bituminous coal show but 3 per cent. of ash and 4.5 is an average. Hence it follows:—(1) That the whole of the impurity in the best coals may have been derived from the plants; (2) the amount of ash in the plants was less than the average of modern species of the same tribes; (3) the winds and waters for long periods contributed almost no dust or detritus to the marshes. In that era of moist climate and universal forests there was hardly any chance for the winds to gather dust or sand for transportation.

Nature.

THE production of opium in Asia Minor, which in former years averaged annually from 2,000 to 3,000 baskets or cases, each contain-

ing 150 lbs., has of late years much increased, and the crop now averages from 4,000 to 6,000 baskets. Out of this quantity, which is shipped at Smyrna, the United States take above 2,000 cases. England at one time consumed a large proportion. The Dutch East India Company also for many years have purchased large quantities annually to send to the islands of Java, Batavia, and Sumatra, and of late years the consumption generally has largely increased, especially for North and South America and the West Indies. Turkey opium is always preferred in England before that of India, as it contains a much higher percentage of morphia than either Indian or Persian; it is on this account that the greater portion of the opium used for medicinal purposes both in Europe and America is the production of Asia Minor. The price of this opium in the market has advanced much of late; fifteen years ago the average price was about 15s. per lb., and it now realizes about 17. per lb., though the fair character even of this product has been tarnished by a system of adulteration which has prevailed during the past two years. About 300 cases of this adulterated opium have been sold in the period mentioned, so that purchasers are now very careful from whom they obtain the drug.

Nature.